STIC Search Report
EIC 1700

STIC Database Tracking Number: 208699

TO: Michael Bernshteyn **Location: REM 10A34** **Art Unit : 1713** **November 29, 2006** **Case Serial Number: 10/532823**	**From: Mei Huang** **Location: EIC 1700** **REMSEN 4B28** **Phone: 571/272-3952** **Mei.huang@uspto.gov**

Search Notes

Examiner Bernshteyn,

Please feel free to contact me if you have any questions or if you would like to refine the search query,

Thank you for using STIC services!

Mei Huang

Access DB# 208699

SCIENTIFIC REFERENCE BR
Sci & Tech Inf - Cnt

SEARCH REQUEST FORM

NOV 28 RECD

Pat & T.M. Office

Scientific and Technical Information Center

Requester's Full Name: MICHAEL BERNSHTEYN Examiner #: 81515 Date: 11/28/06
Art Unit: 1713 Phone Number 30 272-2411 Serial Number: 10/532,823
Mail Box and Bldg/Room Location: Rem. 10A34 Results Format Preferred (circle): (PAPER) DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Mixture for the production of transparent plastic materials

Inventors (please provide full names): Bardo Schmitt, Patrick Hartmann

Earliest Priority Filing Date: 09/12/2003

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please, try to find: 1) the compounds of the formulas (I) and (II) according claim 1 with the limitations for R', R², m u n (claims 2 – 10);
2) compound of formula (X) according claim 11
3) compounds of formulas (XI) and (XII) according claim 12.

Thank you
M. Bern

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: MQH	NA Sequence (#)	STN ✓
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#) 2	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 11/29/06	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time:	Other	Other (specify)

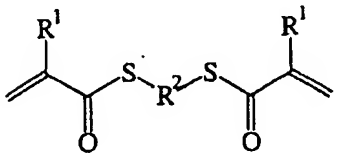
PTO-1590 (8-01)

IN THE CLAIMS

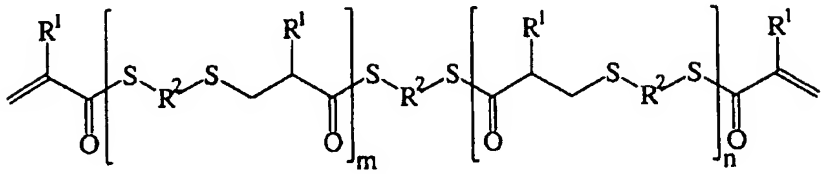
Please amend the claims as follows:

Claim 1 (Currently Amended): ~~Mixture~~ A mixture for preparing transparent plastics, ~~encompassing~~ comprising

a) compounds of the formula (I) and (II)



(I)



(II)

where R^1, is independently of the others, is hydrogen or a methyl radical,

each R^2, is independently of the others, is a linear or branched, aliphatic or cycloaliphatic radical or a substituted or unsubstituted aromatic or heteroaromatic radical and each of m and n, independently of the others, is a whole number greater than or equal to 0, where $m + n > 0$, and

b) at least one monomer (A) capable of free-radical polymerization with a molar mass of at least 150 g/mol, which contains at least two terminal olefinic groups,

~~characterized in that~~ wherein at least two of the olefinic groups of the monomer (A) have, in the α- and/or β-position with respect to the olefinic group, atoms which differ in nature and/or number, in the radical which connects the at least two olefinic groups.

Claim 2 (Currently Amended): ~~Mixture~~ The mixture according to Claim 1, ~~characterized in that~~ wherein the monomer (A) encompasses at least one allyl group and at least one (meth)acryloyl group.

Claim 3 (Currently Amended): ~~Mixture~~ The mixture according to Claim 1 ~~or 2, characterized in that it~~ wherein the mixture comprises more than 10 mol%, based on the total amount of the compounds of the formula (I) and (II), of compounds of the formula (II) where $m + n = 2$.

Claim 4 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the radical R^2 of the formulae (I) and/or (II) is an aliphatic radical having from 1 to 10 carbon atoms.

Claim 5 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the mixture comprises more than 5.8 mol%, based on the total amount of the compounds of the formula (I) and (II), of compounds of the formula (II) where $m + n = 3$.

Claim 6 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the mixture comprises from 0.1 to 50 mol%, based on the total amount of the compounds of the formula (I) and (II), of compounds of the formula (I).

Claim 7 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the mixture comprises more than

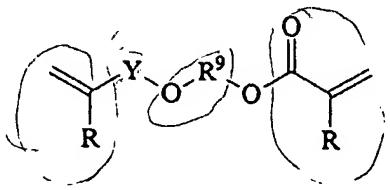
30 mol%, based on the total amount of the compounds of the formula (I) and (II), of compounds of the formula (II) where m + n = 1.

Claim 8 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the mixture comprises compounds of the formula (II) where m + n > 3.

Claim 9 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the total content of compounds of the formula (I) and (II) is at least 5.0% by weight, based on the total weight of the mixture.

Claim 10 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein there are at least 5 bonds separating the most adjacent carbon atoms of the at least two olefinic groups from one another.

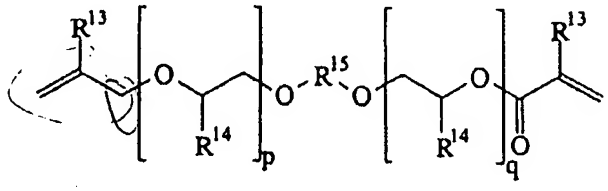
Claim 11 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the mixture comprises, as monomer (A), at least one compound of the formula (X)



(X),

where the radical R is independently a hydrogen atom, a fluorine atom and/or a methyl group, the radical R^9 is a connecting group and the radical Y is a bond or a connecting group having from 1 to 1000 carbon atoms.

Claim 12 (Currently Amended): ~~Mixture~~ The mixture according to ~~any of the preceding claims, characterized in that~~ Claim 1, wherein the mixture comprises, as monomer (A), at least one compound of the formula (XI)



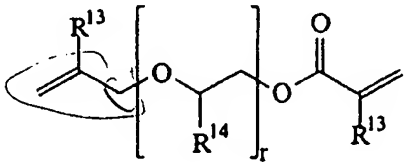
(XI)

where each R^{13}, independently of the other, is hydrogen or a methyl radical,

each R^{14}, independently of the other, is hydrogen or a methyl radical,

R^{15} is a linear or branched, aliphatic or cyclo-aliphatic radical or a substituted or unsubstituted aromatic or heteroaromatic radical, and

each of p and q, independently of the other, is a whole number greater than or equal to 0, where $p + q > 0$, and/or of the formula (XII)



(XII)

where each R^{13}, independently of the other, is hydrogen or a methyl radical,

R^{14} is hydrogen or a methyl radical, and

r is a whole number greater than 0.

STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact*:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

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L3               STR
L4            50 S L3
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L9               STR
L10              STR L9
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L12              STR
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                 SAV L2 TEMP BER823AP/A
L14              STR
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L16              SCR 1313
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L23            8 S (L14 AND L3 NOT L16) SSS FUL  SUB=L5
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L3                STR
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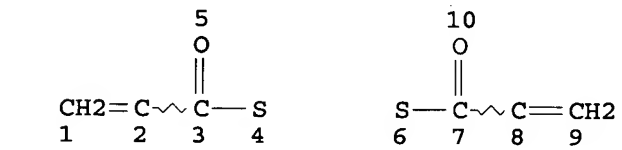


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NODE ATTRIBUTES:
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
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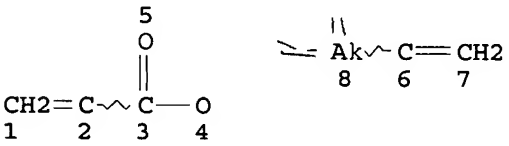
L18 STR



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DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 441 ITERATIONS 2 ANSWERS
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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

=> d l25 ibib abs hitstr hitind

L25 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:322386 HCAPLUS
DOCUMENT NUMBER: 142:392847
TITLE: Mixtures for the production of transparent plastics for optical lenses, transparent plastics as well as procedures for their production and use.
INVENTOR(S): Schmitt, Bardo; Hartmann, Patrik
PATENT ASSIGNEE(S): Roehm GmbH & Co. KG, Germany
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

DE 10342521	A1	20050414	DE 2003-10342521	200309 12
CA 2513147	AA	20050414	CA 2004-2513147	200407 10
WO 2005033157	A1	20050414	WO 2004-EP7623	200407 10

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1558656	A1	20050803	EP 2004-763159	200407 10
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BR 2004006204	A	20050809	BR 2004-6204	200407 10
CN 1705689	A	20051207	CN 2004-80001048	200407 10
AT 338778	E	20060915	AT 2004-763159	200407 10
US 2006052564	A1	20060309	US 2005-532823	200504 26

PRIORITY APPLN. INFO.:			DE 2003-10342521 A	200309 12
			WO 2004-EP7623 W	200407 10

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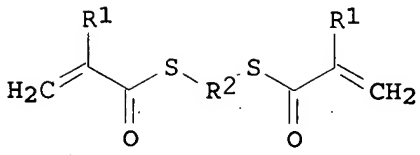

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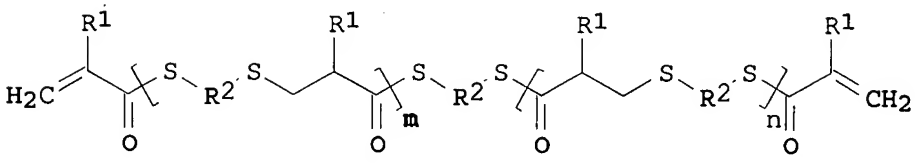


II

AB A title mixture useful for optical lenses manufacture comprises dithiol diacrylates I and II (R1 = H or Me, R2 = linear or branched, aliphatic or cycloaliph. groups, or substituted or unsubstituted aromatic or heteroarom. groups, m + n >0) and a radical polymerizable monomer (A) having mol. weight ≥150 and ≥2 olefinic groups [such as allyl or/and (meth)acryloyl-groups] per mol.

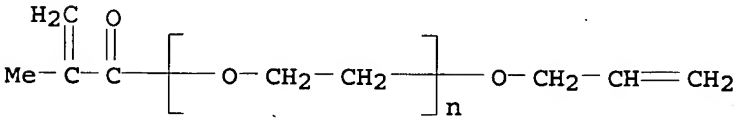
IT **849671-67-6P**, 1,2-Ethanedithiol dimethacrylate-Polyethylene glycol allyl ether methacrylate-styrene copolymer **849671-68-7P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(mixts. for production of transparent plastics)

RN 849671-67-6 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-(2-propenyloxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 121826-50-4
CMF (C2 H4 O)n C7 H10 O2
CCI PMS



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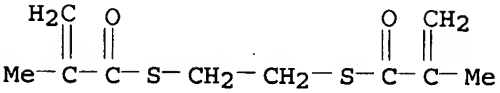
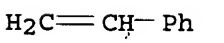
CRN 117675-95-3
CMF C10 H14 O2 S2



CM 3

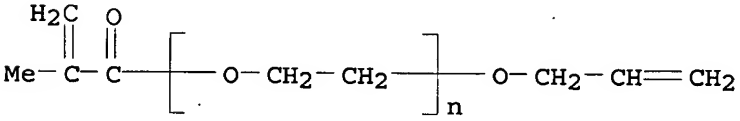
CRN 100-42-5
CMF C8 H8



RN 849671-68-7 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-(2-propenyloxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

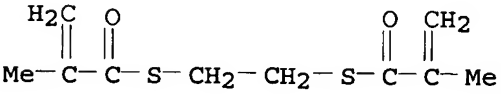
CM 1

CRN 121826-50-4
CMF (C2 H4 O)n C7 H10 O2
CCI PMS



CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2



IC ICM C08F020-38
CC 35-4 (Chemistry of Synthetic High Polymers)
IT **849671-67-6P**, 1,2-Ethanedithiol dimethacrylate-Polyethylene glycol allyl ether methacrylate-styrene copolymer
849671-68-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(mixts. for production of transparent plastics)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>

=> d l51 ibib abs hitstr hitind 1-5 16-20 31-35 51-55

L51 ANSWER 1 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:344323 HCAPLUS
DOCUMENT NUMBER: 142:375032
TITLE: Amorphous polyester **compositions** and their transparent moldings with good impact and weather resistance
INVENTOR(S): Hattori, Kimihiko; Sekita, Mari; Osuka, Masahiro
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005105075	A2	20050421	JP 2003-338417	20030929

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PRIORITY APPLN. INFO.: JP 2003-338417 20030929

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AB The compns., useful for packaging materials, comprise (A) 70-99% amorphous polyesters and (B) 1-30% graft copolymers (weight-average particle size ≤0.10 μm, ≥0.15-μm particle content ≤10%) prepared by graft polymerization of 35-75 parts vinyl monomers on 25-65 parts alkyl (meth)acrylate copolymers, which are prepared from (a) 30-100% alkyl (meth)acrylates, (b) 0-70% aromatic vinyl monomers or aromatic (meth)acrylates, (c) 0-10% other vinyl monomers, and (d) 0-5% crosslinkable monomers. Thus, a composition containing 100 parts Eastar 6763 (amorphous polyester) and 5 parts graft copolymer prepared by graft polymerization of Me methacrylate and styrene on allyl methacrylate-Bu acrylate-divinylbenzene-styrene rubber was pressed to give a sheet showing total light transmittance 78% and Izod impact strength at 23° after storage at 23° and relative humidity 10% for 30 days 480 J/m.

IT **258882-37-0P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(impact modifier; amorphous polyester compns. for **transparent** moldings with good impact and weather resistance)

RN 258882-37-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, diethenylbenzene, ethenylbenzene and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

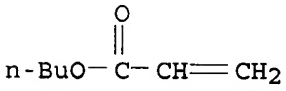
CM 1

CRN 1321-74-0
CMF C10 H10
CCI IDS

2 [D1— CH═ CH_2]

CM 2

CRN 141-32-2
CMF C7 H12 O2



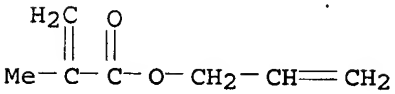
CM 3

CRN 100-42-5
CMF C8 H8

H_2C═ CH— Ph

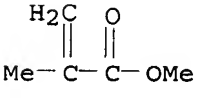
CM 4

CRN 96-05-9
CMF C7 H10 O2



CM 5

CRN 80-62-6
CMF C5 H8 O2



IT 9052-87-3P, Allyl methacrylate-butyl acrylate-divinylbenzene-styrene copolymer
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(rubber; amorphous polyester compns. for **transparent** moldings with good impact and weather resistance)

RN 9052-87-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with butyl 2-propenoate, diethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

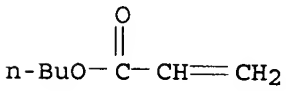
CM 1

CRN 1321-74-0
CMF C10 H10
CCI IDS

2 [D1-CH=CH2]

CM 2

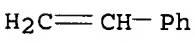
CRN 141-32-2
CMF C7 H12 O2



n-BuO-C(=O)-CH=CH2

CM 3

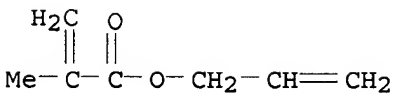
CRN 100-42-5
CMF C8 H8



H2C=CH-Ph

CM 4

CRN 96-05-9
CMF C7 H10 O2



IC ICM C08L067-00
ICS B65D001-09; B65D065-02; C08L051-00
CC 38-3 (Plastics Fabrication and Uses)
IT **258882-37-0P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(impact modifier; amorphous polyester compns. for **transparent** moldings with good impact and weather resistance)
IT **9052-87-3P**, Allyl methacrylate-butyl acrylate-divinylbenzene-styrene copolymer
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(rubber; amorphous polyester compns. for **transparent** moldings with good impact and weather resistance)

L51 ANSWER 2 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:322386 HCAPLUS
DOCUMENT NUMBER: 142:392847
TITLE: **Mixtures** for the production of transparent plastics for optical lenses, transparent plastics as well as procedures for their production and use.
INVENTOR(S): Schmitt, Bardo; Hartmann, Patrik
PATENT ASSIGNEE(S): Roehm GmbH & Co. KG, Germany
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10342521	A1	20050414	DE 2003-10342521	200309 12
CA 2513147	AA	20050414	CA 2004-2513147	200407 10 <--
WO 2005033157	A1	20050414	WO 2004-EP7623	200407 10 <--

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1558656	A1	20050803	EP 2004-763159	200407 10
			<--	
EP 1558656	B1	20060906		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004006204	A	20050809	BR 2004-6204	200407 10
			<--	
CN 1705689	A	20051207	CN 2004-80001048	200407 10
			<--	
AT 338778	E	20060915	AT 2004-763159	200407 10
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US 2006052564	A1	20060309	US 2005-532823	200504 26
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PRIORITY APPLN. INFO.:			DE 2003-10342521 A	200309 12
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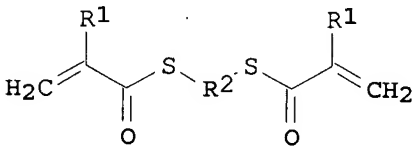
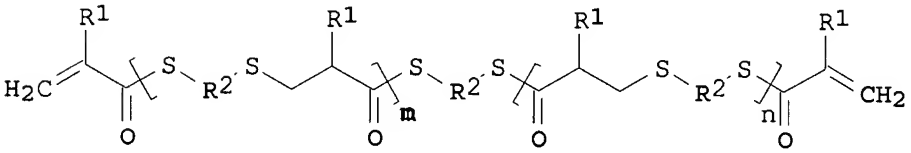
			WO 2004-EP7623 W	200407 10

GI



I



II

AB A title mixture useful for optical lenses manufacture comprises dithiol diacrylates I and II (R1 = H or Me, R2 = linear or branched, aliphatic or cycloaliph. groups, or substituted or unsubstituted aromatic or heteroarom. groups, m + n >0) and a radical polymerizable monomer

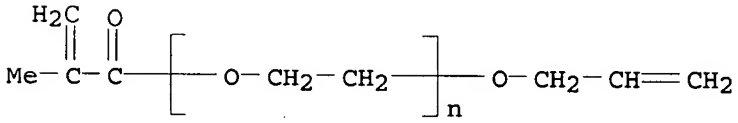
(A) having mol. weight ≥150 and ≥2 olefinic groups [such as allyl or/and (meth)acryloyl-groups] per mol.

IT **849671-67-6P**, 1,2-Ethanedithiol dimethacrylate-Polyethylene glycol allyl ether methacrylate-styrene copolymer **849671-68-7P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(mixts. for production of **transparent** plastics)

RN 849671-67-6 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-(2-propenyloxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

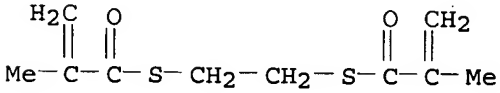
CM 1

CRN 121826-50-4
CMF (C2 H4 O)n C7 H10 O2
CCI PMS



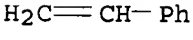
CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2



CM 3

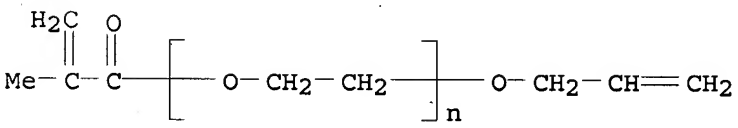
CRN 100-42-5
CMF C8 H8



RN 849671-68-7 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-(2-propenyloxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

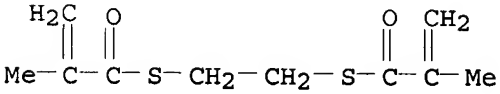
CM 1

CRN 121826-50-4
CMF (C2 H4 O)n C7 H10 O2
CCI PMS



CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2



IC ICM C08F020-38
CC 35-4 (Chemistry of Synthetic High Polymers)
IT **849671-67-6P**, 1,2-Ethanedithiol dimethacrylate-Polyethylene glycol allyl ether methacrylate-styrene copolymer
849671-68-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(mixts. for production of **transparent** plastics)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 3 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1058408 HCAPLUS
DOCUMENT NUMBER: 142:24041
TITLE: Antistatic transparent acrylic resin **compositions**
INVENTOR(S): Marutani, Takao; Hatakeyama, Hiroki
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004346126	A2	20041209	JP 2003-142129	200305 20 <--

PRIORITY APPLN. INFO.: JP 2003-142129 200305 20 <--

AB The compns. contain (A) acrylic resins which may contain impact modifiers 100, (B) polyether-ester-amides (PEEA) having difference of refractive index with that of the acrylic resins ≤0.01

3-25, and (C) Li(CF3SO2)2N (I) 0.01-3 parts. Thus, copolymn. of 98 parts Me methacrylate with 2 parts Me acrylate in H2O in the presence of AIBN, octyl mercaptan, and anionic polymeric dispersion stabilizers (2-sodiosulfoethyl methacrylate-potassium methacrylate (KMA)-Me methacrylate (MMA) copolymer and KMA-MMA copolymer) gave an acrylic resin with refractive index 1.49, 100 parts of which was blended with PEEA (Pelestat 300, refractive index 1.49) 12, I (Fluorad HQ 115) 0.2, a P-containing stabilizer (ADK Stab 2112) 0.15, an antioxidant (Irganox 1076) 0.3, and a UV absorber (Tinuvin P) 0.03 part to give a composition Its injection-molded test pieces showed total light transmittance 90.8%, haze 1.2, and YI value 5.8, which changed little after 5 days at 60° and 90% RH, and surface sp. resistivity 1.8 + 1011 and 1.7 + 1011 Ω initially and after washing with water.

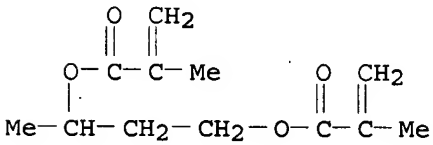
IT **93120-59-3P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(impact modifier; antistatic **transparent** acrylic resin compns. containing polyether-ester-amides and Li bis(trifluoromethane)imide)

RN 93120-59-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1,3-propanediyl ester, polymer with butyl 2-propenoate, ethenylbenzene, methyl 2-methyl-2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

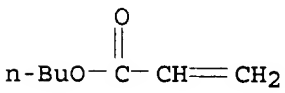
CM 1

CRN 1189-08-8
CMF C12 H18 O4



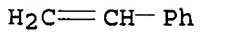
CM 2

CRN 141-32-2
CMF C7 H12 O2



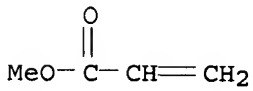
CM 3

CRN 100-42-5
CMF C8 H8



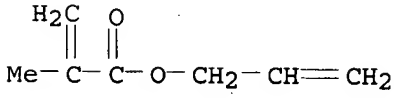
CM 4

CRN 96-33-3
CMF C4 H6 O2



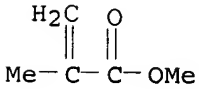
CM 5

CRN 96-05-9
CMF C7 H10 O2



CM 6

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08L033-00
ICS C08K005-43; C08L077-12
CC 37-6 (Plastics Manufacture and Processing)
IT **93120-59-3P** 156697-84-6P, 1,3-Butadiene-butyl acrylate-methyl acrylate-methyl methacrylate graft copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(impact modifier; antistatic **transparent** acrylic resin compns. containing polyether-ester-amides and Li bis(trifluoromethane)imide)

L51 ANSWER 4 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:993281 HCAPLUS
DOCUMENT NUMBER: 141:429451
TITLE: Polymerizable liquid crystal **compositions** and optically anisotropic materials from them with excellent transparency
INVENTOR(S): Kawamura, Shoji; Li, Cheng-Ze; Ono, Yoshiyuki; Yonehara, Yoshitomo; Hasebe, Hiroshi

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004323729	A2	20041118	JP 2003-121765 <--	20030425

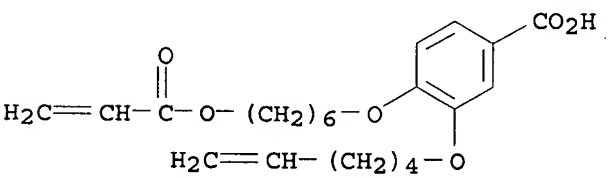
PRIORITY APPLN. INFO.: JP 2003-121765 <-- 20030425

OTHER SOURCE(S): MARPAT 141:429451

AB The compns. contain polymerizable compds. H2C:CL1COOS1X1A1Y1A2Y2A3(X2S2Z1)(X3S3Z2) [A; A1-3 = benzene, cyclohexane, or cyclohexene ring; Y1,2 = single bond, CH2CH2, CH2O, OCH2, etc., X1-3 = single bond, O, COO, OCO; S1-3 = CpH2p, (CpH2pO)qCrH2s; p, r = 1-20; q, s = 1-10; L1 = H, Me; Z1,2 = OCOCH2CH2Cl, OCOCH:CH2, etc.], Z3S4X4A4Y3A5Y4A6(X5S5OCOCL2:CH2)(X6S6OCOCL3:CH2) (B; A4-6 = same as A1; Y3,4 = same as Y1; X4-6 = same as X1; S5,6 = same as S1; L2,3 = H, Me; Z3 = H, MeCOO), Z4A7Y5A8Y6A9(X7S7OCOCL4:CH2)(X8S8OCOCL5:CH2) [C; A7-9 = same as A1; Y5,6 = same as Y1; X7,8 = same as X1; S7,8 = same as S1; L4,5 = H, Me; Z4 = H, cyano, Cl(CH2)aO; a = 1-20], and H2C:CL6COOA10Y7(A11Y8)bA12Y9Z5 (D; A10-12 = same as A1; Y7,8 = same as Y1; Y9 = single bond, O, COO, OCO; Z5 = H, halo, cyano, C1-20 alkyl, C2-20 alkenyl; b = 0, 1). The compns. show nematic phases at 25° with long-term stability.

IT **710981-11-6P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(for polymerizable compound preparation; polymerizable liquid crystal compns. containing certain swallowtail-type compds. showing stable nematic phase at 25° for **transparent optically** anisotropic materials)

RN 710981-11-6 HCAPLUS
CN Benzoic acid, 3-(5-hexenyloxy)-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]- (9CI) (CA INDEX NAME)



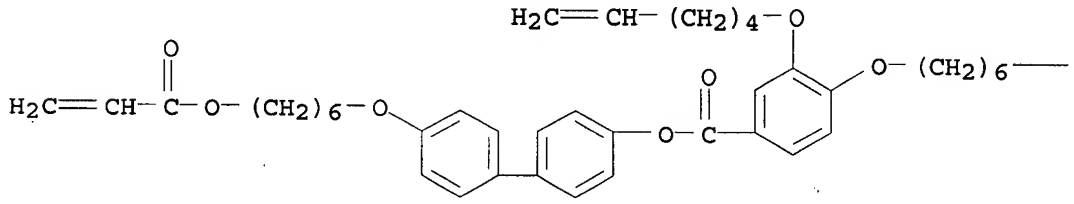
IT **710981-71-8DP**, mixture containing
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(polymerizable compound; polymerizable liquid crystal compns. containing certain swallowtail-type compds. showing stable nematic phase at 25° for **transparent optically** anisotropic materials)

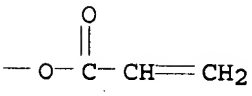
RN 710981-71-8 HCAPLUS

CN Benzoic acid, 3-(5-hexenyloxy)-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 4'-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy][1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C09K019-38
ICS C08F220-26

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 38, 75

IT 78435-28-6P 139419-12-8P 277761-24-7P 277761-25-8P
642478-56-6P 710980-91-9P 710980-96-4P 710981-01-4P
710981-05-8P **710981-11-6P** 710981-17-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(for polymerizable compound preparation; polymerizable liquid crystal compns. containing certain swallowtail-type compds. showing stable nematic phase at 25° for **transparent optically** anisotropic materials)

IT 277761-26-9DP, mixture containing 710981-24-1DP, mixture containing
710981-33-2DP, mixture containing 710981-42-3DP, mixture containing
710981-64-9DP, mixture containing **710981-71-8DP**, mixture containing
710981-78-5DP, mixture containing 710981-86-5DP, mixture containing
794534-89-7DP, mixture containing 794534-90-0DP, mixture containing
794534-91-1DP, mixture containing 794534-92-2DP, mixture containing
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polymerizable compound; polymerizable liquid crystal compns. containing certain swallowtail-type compds. showing stable nematic phase at 25° for **transparent optically** anisotropic materials)

L51 ANSWER 5 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:898859 HCAPLUS
DOCUMENT NUMBER: 141:372902
TITLE: Heat-resistant curable resin **compositions** with high transparency and their uses for displays
INVENTOR(S): Kaneko, Tomomasa; Ueda, Kenichi
PATENT ASSIGNEE(S): Nippon Shokubai Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004300204	A2	20041028	JP 2003-92597	200303 28
KR 2004084825	A	20041006	KR 2004-20335	200403 25
CN 1542067	A	20041103	CN 2004-10031284	200403 26
PRIORITY APPLN. INFO.:			JP 2003-92597 A	200303 28

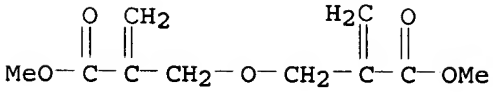
AB The compns., useful for color filters, comprise polymers prepared from R1OCOC(:CH2)CH2OCH2C(:CH2)CO2R2 (R1, R2 = H, C1-25 hydrocarbyl) and radical monomers and/or epoxy monomers. Display devices employing color filters forming cured layers of the compns. are further claimed.

IT **780761-36-6P 780761-37-7P 780761-39-9P**
780761-41-3P 780761-42-4P 780761-43-5P
780761-44-6P 780761-46-8P 780761-48-0P
780789-95-9P 780789-96-0P 780789-99-3P
780790-02-5P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant **transparent** photoimaging resin compns. for color filters of LCD)

RN 780761-36-6 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with dimethyl 2,2'-[oxybis(methylene)]bis[2-propenoate], methyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

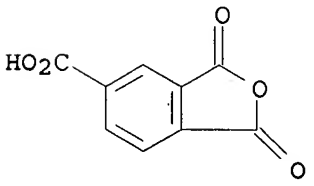
CM 1

CRN 109669-53-6
CMF C10 H14 O5



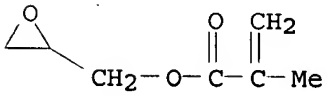
CM 2

CRN 552-30-7
CMF C9 H4 O5



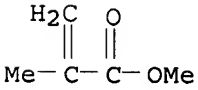
CM 3

CRN 106-91-2
CMF C7 H10 O3



CM 4

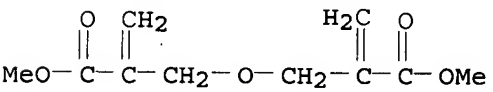
CRN 80-62-6
CMF C5 H8 O2



RN 780761-37-7 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with dimethyl 2,2'-[oxybis(methylene)]bis[2-propenoate], EOCN 103S, methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 109669-53-6
CMF C10 H14 O5



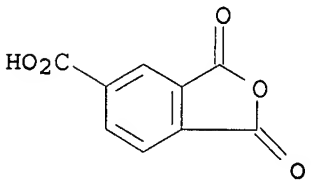
CM 2

CRN 96119-31-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

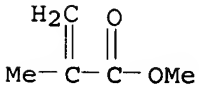
CM 3

CRN 552-30-7
CMF C9 H4 O5



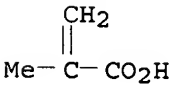
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

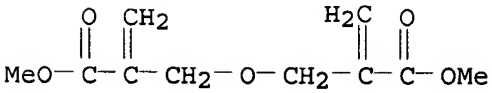
CRN 79-41-4
CMF C4 H6 O2



RN 780761-39-9 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, dimethyl ester, polymer with methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

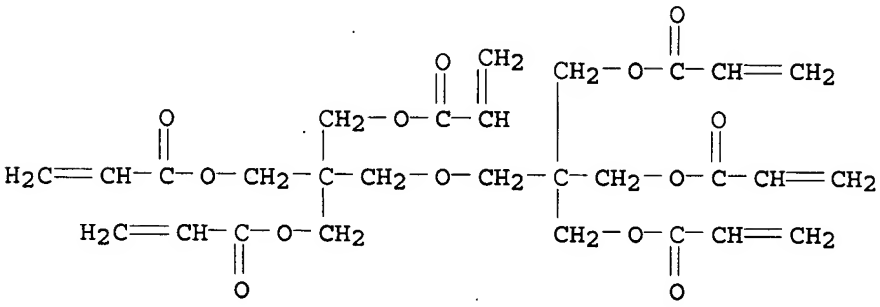
CM 1

CRN 109669-53-6
CMF C10 H14 O5



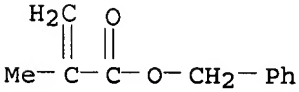
CM 2

CRN 29570-58-9
CMF C28 H34 O13



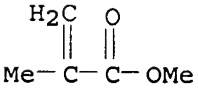
CM 3

CRN 2495-37-6
CMF C11 H12 O2



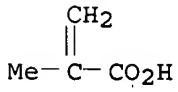
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

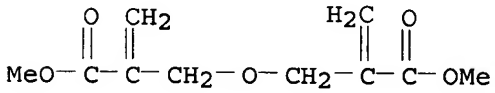
CRN 79-41-4
CMF C4 H6 O2



RN 780761-41-3 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with cyclohexyl 2-methyl-2-propenoate, dimethyl 2,2'-[oxybis(methylene)]bis[2-propenoate], EOCN 103S, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid and 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 109669-53-6
CMF C10 H14 O5



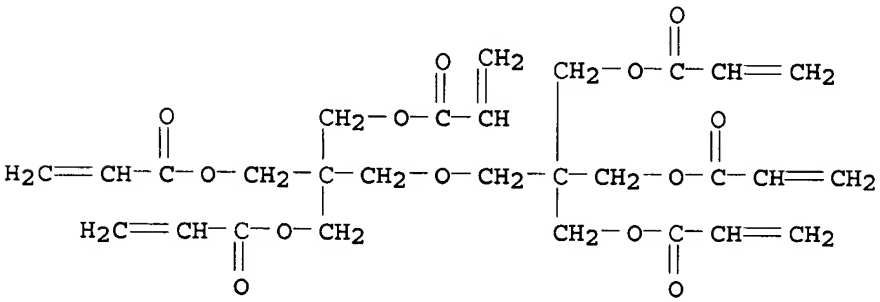
CM 2

CRN 96119-31-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

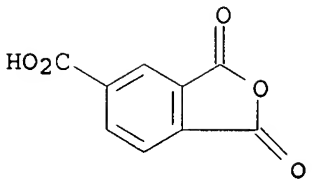
CM 3

CRN 29570-58-9
CMF C28 H34 O13



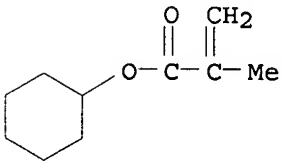
CM 4

CRN 552-30-7
CMF C9 H4 O5



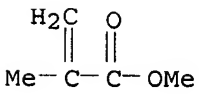
CM 5

CRN 101-43-9
CMF C10 H16 O2



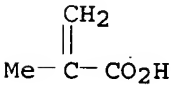
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

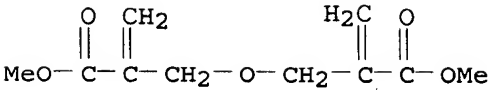
CRN 79-41-4
CMF C4 H6 O2



RN 780761-42-4 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with dimethyl 2,2'-[oxybis(methylene)]bis[2-propenoate], EOCN 103S, ethenylbenzene, methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 109669-53-6
CMF C10 H14 O5



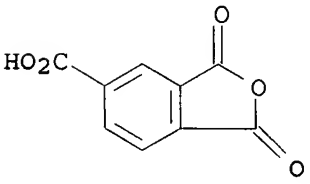
CM 2

CRN 96119-31-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

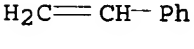
CM 3

CRN 552-30-7
CMF C9 H4 O5



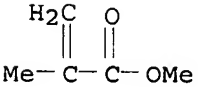
CM 4

CRN 100-42-5
CMF C8 H8



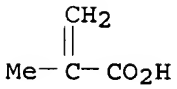
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

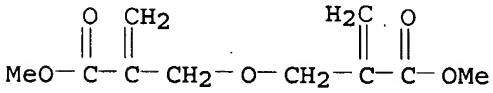
CRN 79-41-4
CMF C4 H6 O2



RN 780761-43-5 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, dimethyl ester, polymer with ethenylbenzene, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxiranylmethyl 2-methyl-2-propenoate and 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

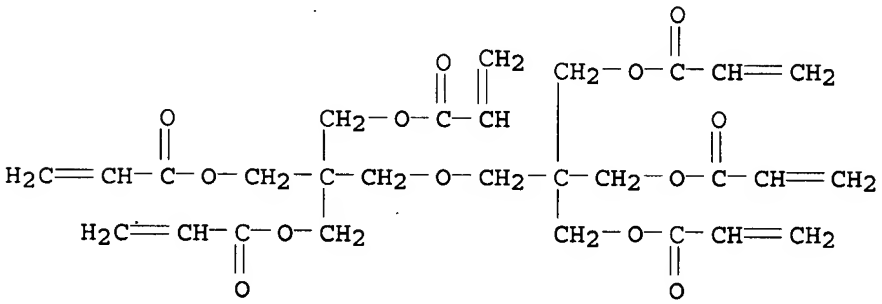
CM 1

CRN 109669-53-6
CMF C10 H14 O5



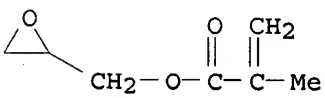
CM 2

CRN 29570-58-9
CMF C28 H34 O13



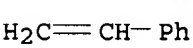
CM 3

CRN 106-91-2
CMF C7 H10 O3



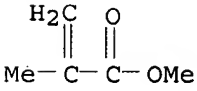
CM 4

CRN 100-42-5
CMF C8 H8



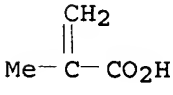
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

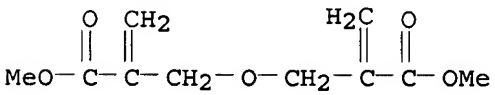
CRN 79-41-4
CMF C4 H6 O2



RN 780761-44-6 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, dimethyl ester, polymer with methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid and 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

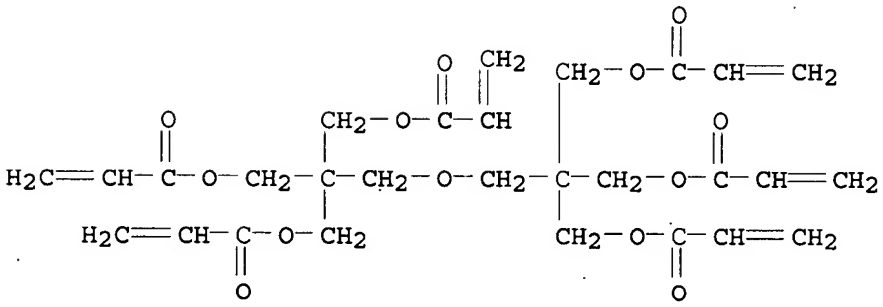
CM 1

CRN 109669-53-6
CMF C10 H14 O5



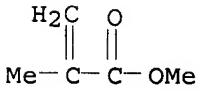
CM 2

CRN 29570-58-9
CMF C28 H34 O13



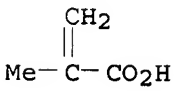
CM 3

CRN 80-62-6
CMF C5 H8 O2



CM 4

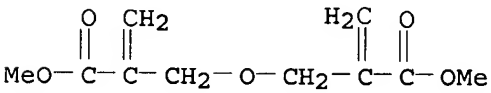
CRN 79-41-4
CMF C4 H6 O2



RN 780761-46-8 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with dimethyl 2,2'-[oxybis(methylene)]bis[2-propenoate], ethenylbenzene, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

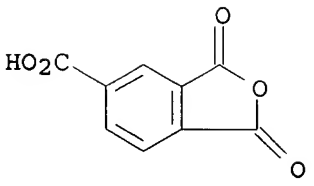
CM 1

CRN 109669-53-6
CMF C10 H14 O5



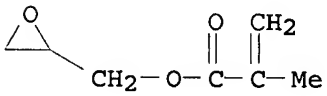
CM 2

CRN 552-30-7
CMF C9 H4 O5



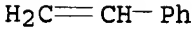
CM 3

CRN 106-91-2
CMF C7 H10 O3



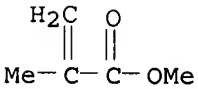
CM 4

CRN 100-42-5
CMF C8 H8



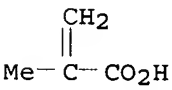
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

CRN 79-41-4
CMF C4 H6 O2

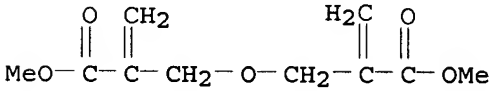


RN 780761-48-0 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with dimethyl 2,2'-[oxybis(methylene)]bis[2-propenoate], ethenylbenzene,

methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxiranylmethyl 2-methyl-2-propenoate and 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

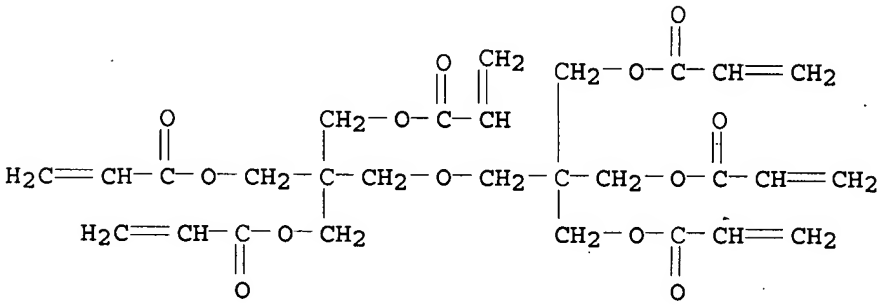
CM 1

CRN 109669-53-6
CMF C10 H14 O5



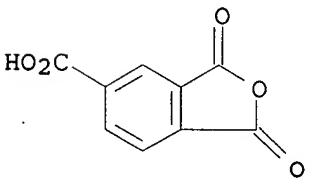
CM 2

CRN 29570-58-9
CMF C28 H34 O13



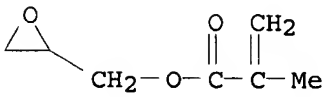
CM 3

CRN 552-30-7
CMF C9 H4 O5



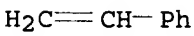
CM 4

CRN 106-91-2
CMF C7 H10 O3



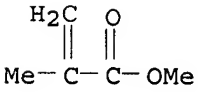
CM 5

CRN 100-42-5
CMF C8 H8



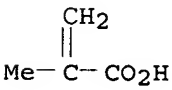
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

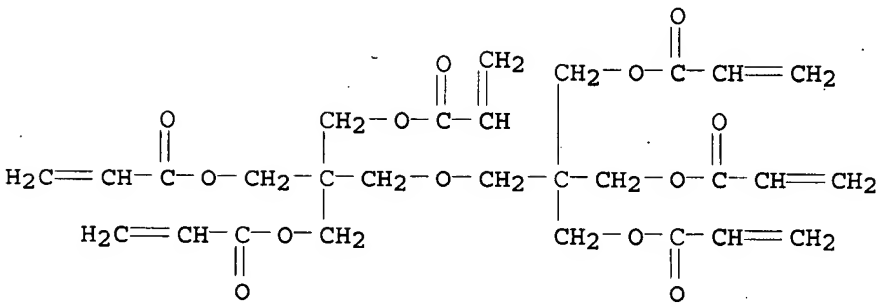
CRN 79-41-4
CMF C4 H6 O2



RN 780789-95-9 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, dimethyl ester, polymer with methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 29570-58-9
CMF C28 H34 O13

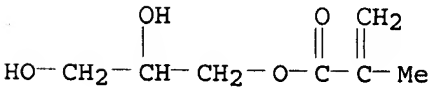


CM 2

CRN 780789-94-8
CMF (C10 H14 O5 . C5 H8 O2 . C4 H6 O2)x . x C7 H12 O4

CM 3

CRN 5919-74-4
CMF C7 H12 O4

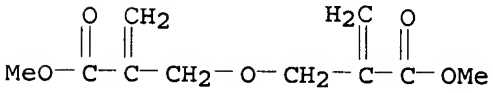


CM 4

CRN 780789-93-7
CMF (C10 H14 O5 . C5 H8 O2 . C4 H6 O2)x
CCI PMS

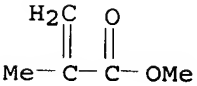
CM 5

CRN 109669-53-6
CMF C10 H14 O5



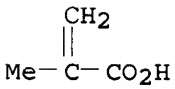
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

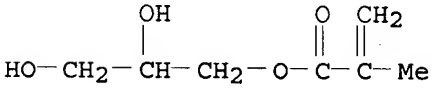
CRN 79-41-4
CMF C4 H6 O2



RN 780789-96-0 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, dimethyl ester, polymer with methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and phenylmethyl 2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4
CMF C7 H12 O4

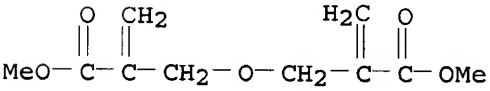


CM 2

CRN 780761-39-9
CMF (C28 H34 O13 . C11 H12 O2 . C10 H14 O5 . C5 H8 O2 . C4 H6 O2)x
CCI PMS

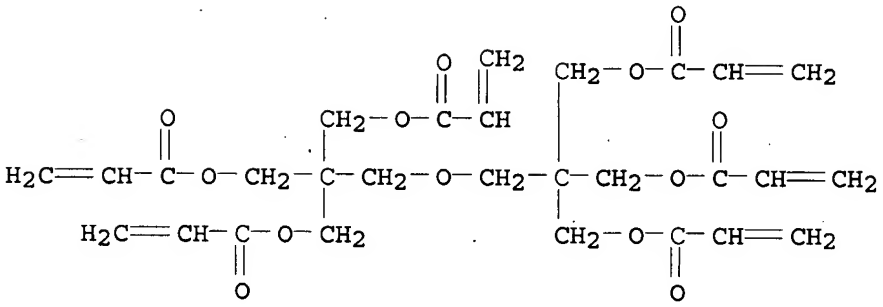
CM 3

CRN 109669-53-6
CMF C10 H14 O5



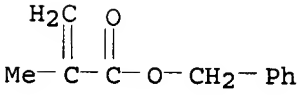
CM 4

CRN 29570-58-9
CMF C28 H34 O13



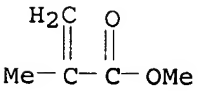
CM 5

CRN 2495-37-6
CMF C11 H12 O2



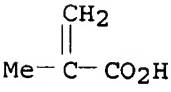
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

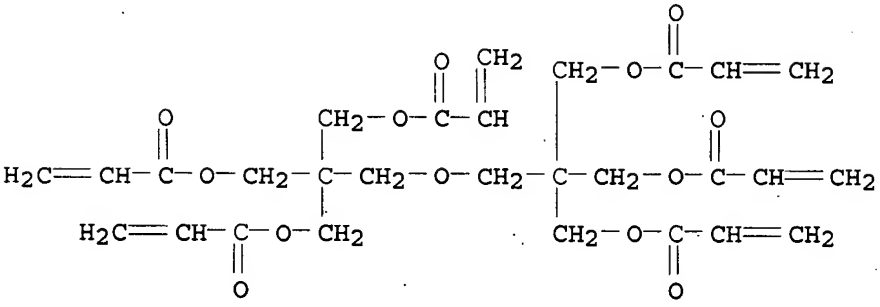
CRN 79-41-4
CMF C4 H6 O2



RN 780789-99-3 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, dimethyl ester, polymer with 2-methyl-2-propenoic acid and phenylmethyl 2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 29570-58-9
CMF C28 H34 O13

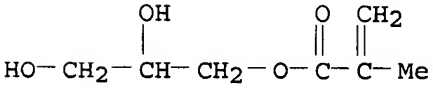


CM 2

CRN 780789-98-2
CMF (C11 H12 O2 . C10 H14 O5 . C4 H6 O2)x . x C7 H12 O4

CM 3

CRN 5919-74-4
CMF C7 H12 O4

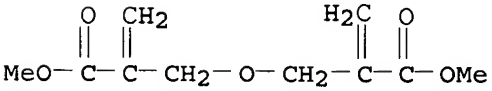


CM 4

CRN 780789-97-1
CMF (C11 H12 O2 . C10 H14 O5 . C4 H6 O2)x
CCI PMS

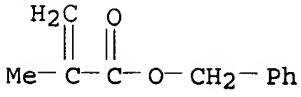
CM 5

CRN 109669-53-6
CMF C10 H14 O5



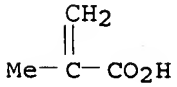
CM 6

CRN 2495-37-6
CMF C11 H12 O2



CM 7

CRN 79-41-4
CMF C4 H6 O2



RN 780790-02-5 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, dimethyl ester, polymer with cyclohexyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with EOCN 103S and 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

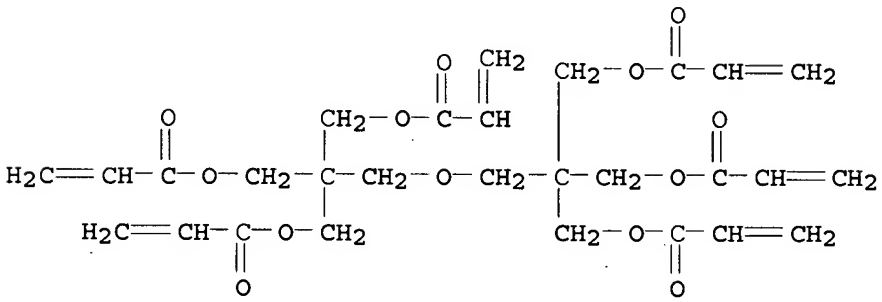
CM 1

CRN 96119-31-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 29570-58-9
CMF C28 H34 O13



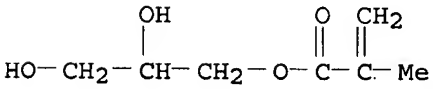
CM 3

CRN 780790-01-4

CMF (C10 H16 O2 . C10 H14 O5 . C5 H8 O2 . C4 H6 O2)x . x C7 H12 O4

CM 4

CRN 5919-74-4
CMF C7 H12 O4

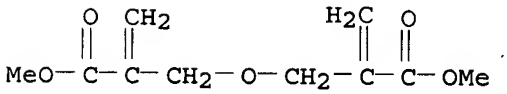


CM 5

CRN 780790-00-3
CMF (C10 H16 O2 . C10 H14 O5 . C5 H8 O2 . C4 H6 O2)x
CCI PMS

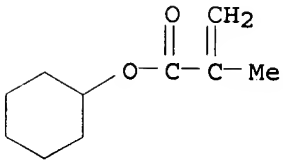
CM 6

CRN 109669-53-6
CMF C10 H14 O5



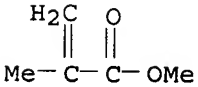
CM 7

CRN 101-43-9
CMF C10 H16 O2



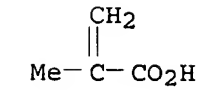
CM 8

CRN 80-62-6
CMF C5 H8 O2



CM 9

CRN 79-41-4
CMF C4 H6 O2



IC ICM C08L063-00
ICS C08F002-44; C08F265-00; C08G059-42; G02B005-20
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT **780761-36-6P 780761-37-7P 780761-39-9P**
780761-41-3P 780761-42-4P 780761-43-5P
780761-44-6P 780761-46-8P 780761-48-0P
780789-95-9P 780789-96-0P 780789-99-3P
780790-02-5P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant **transparent** photoimaging resin compns. for color filters of LCD)

L51 ANSWER 16 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:400351 HCAPLUS
DOCUMENT NUMBER: 136:387242
TITLE: Acrylic graft polymer **compositions**, their solvent-resistant transparent films, and laminates
INVENTOR(S): Kitaike, Yukio; Kitajima, Koichiro; Fujii, Hideyuki
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002155185	A2	20020528	JP 2000-354888	200011 21 <--
PRIORITY APPLN. INFO.:			JP 2000-354888	200011 21 <--

AB The compns., useful for in-mold coating, etc., comprise alkyl methacrylate copolymers and rubber-containing multilayer graft polymers, which comprise (A) multi- or mono-layer alkyl acrylate elastic polymers and (B) vinyl cyanide polymers. Thus, a composition comprising acrylonitrile-allyl methacrylate-Bu acrylate-styrene graft

copolymer, Bu acrylate-Me methacrylate copolymer, and Me acrylate-Me methacrylate copolymer was extruded to give a film showing haze 10.6%, surface gloss 75%, and total light transmittance 89.9%.

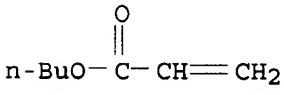
IT **118037-25-5P**, Acrylonitrile-allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
118687-58-4P, Acrylonitrile-allyl methacrylate-butyl acrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(core-shell; solvent-resistant **transparent** films having rubber-containing core-shell acrylic resins)

RN 118037-25-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-propenenitrile and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

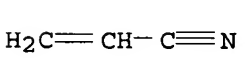
CM 1

CRN 141-32-2
CMF C7 H12 O2



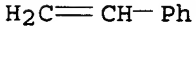
CM 2

CRN 107-13-1
CMF C3 H3 N



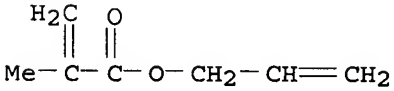
CM 3

CRN 100-42-5
CMF C8 H8



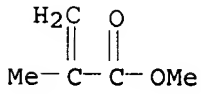
CM 4

CRN 96-05-9
CMF C7 H10 O2



CM 5

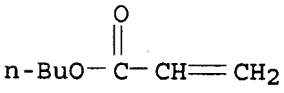
CRN 80-62-6
CMF C5 H8 O2



RN 118687-58-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with butyl 2-propenoate, ethenylbenzene and 2-propenenitrile, graft (9CI) (CA INDEX NAME)

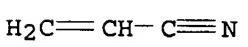
CM 1

CRN 141-32-2
CMF C7 H12 O2



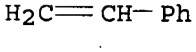
CM 2

CRN 107-13-1
CMF C3 H3 N



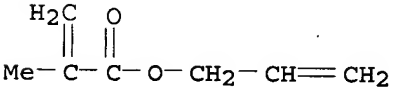
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

CRN 96-05-9
CMF C7 H10 O2



IC ICM C08L051-00
ICS B32B027-30; C08F265-06; C08J005-18; C08L033-10
CC 38-3 (Plastics Fabrication and Uses)
IT **118037-25-5P**, Acrylonitrile-allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
118687-58-4P, Acrylonitrile-allyl methacrylate-butyl acrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(core-shell; solvent-resistant **transparent** films having rubber-containing core-shell acrylic resins)

L51 ANSWER 17 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:397859 HCAPLUS
DOCUMENT NUMBER: 136:387234
TITLE: Acrylic resin **compositions**, their **transparent** films with good weather and solvent resistance, and laminated materials having them on surface
INVENTOR(S): Kitaike, Yukio; Kitajima, Koichiro; Fujii, Hideyuki
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

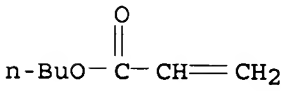
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002155184	A2	20020528	JP 2000-354882	200011 21 <--
PRIORITY APPLN. INFO.:			JP 2000-354882	200011 21 <--

AB The compns., useful for in-mold coating, etc., comprise alkyl methacrylate copolymers and rubber-containing multilayer polymers, which comprise (A) multi- or mono-layer alkyl acrylate elastic polymers, (B) a middle layer of alkyl methacrylate polymers, and (C) an outer-most layer of vinyl cyanide polymers. Thus, a composition comprising acrylonitrile-allyl methacrylate-Bu acrylate-Me methacrylate-styrene core-shell graft copolymer, Bu acrylate-Me methacrylate copolymer, and Me acrylate-Me methacrylate copolymer was extruded to give a film showing haze 1.1%, surface gloss 144%, and total light transmittance 92.5%.
IT **118037-25-5P**, Acrylonitrile-allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(core-shell; weather- and solvent-resistant **transparent** films having rubber-containing core-shell acrylic resins)
RN 118037-25-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-propenenitrile and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

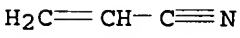
CM 1

CRN 141-32-2
CMF C7 H12 O2



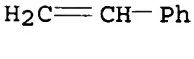
CM 2

CRN 107-13-1
CMF C3 H3 N



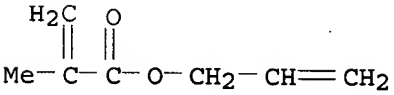
CM 3

CRN 100-42-5
CMF C8 H8



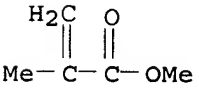
CM 4

CRN 96-05-9
CMF C7 H10 O2



CM 5

CRN 80-62-6
CMF C5 H8 O2



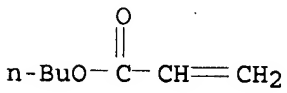
IT **110254-00-7P**, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(weather- and solvent-resistant **transparent** films having rubber-containing core-shell acrylic resins)

RN 110254-00-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

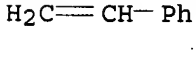
CM 1

CRN 141-32-2
CMF C7 H12 O2



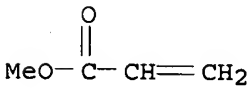
CM 2

CRN 100-42-5
CMF C8 H8



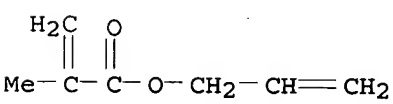
CM 3

CRN 96-33-3
CMF C4 H6 O2



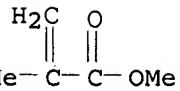
CM 4

CRN 96-05-9
CMF C7 H10 O2



CM 5

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08L033-08
ICS B32B027-30; C08F002-22; C08J005-18; C08L033-10; C08L033-18
CC 38-3 (Plastics Fabrication and Uses)
IT **118037-25-5P**, Acrylonitrile-allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(core-shell; weather- and solvent-resistant **transparent** films having rubber-containing core-shell acrylic resins)
IT 25852-37-3P, Butyl acrylate-methyl methacrylate copolymer
110254-00-7P, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(weather- and solvent-resistant **transparent** films having rubber-containing core-shell acrylic resins)

L51 ANSWER 18 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:100928 HCAPLUS
DOCUMENT NUMBER: 134:168387
TITLE: Biomedical **compositions** preparation of intraocular lenses
INVENTOR(S): Clayton, Anthony Brian; Meijs, Gordon Francis
PATENT ASSIGNEE(S): Commonwealth Scientific and Industrial Research Organisation, Australia
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001008603	A1	20010208	WO 2000-AU915	20000802

<--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2391817	AA	20010208	CA 2000-2391817	200008 02 <--
EP 1207816	A1	20020529	EP 2000-947678	200008 02 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003505584	T2	20030212	JP 2001-513340	200008 02 <--
AU 780010	B2	20050224	AU 2000-61404	200008 02 <--
PRIORITY APPLN. INFO.:			AU 1999-1978 A	199908 02 <--
			WO 2000-AU915 W	200008 02 <--

AB A method of preparing intraocular lenses in situ is disclosed. The method involves the injection of an unsatd. alkyldimethylsiloxane macromonomer. The macromonomer is then polymerized to give a polymer having an E modulus in the range 0.5-5 kPa. An acrylamidoorganosilicon macromer was prepared by the reaction of aminopropylmethylsiloxane-dimethylsiloxane copolymer with 2-vinyl-4,4-dimethylazlactone. A solution containing acrylamide-functional siloxane 100, and Irgacure 651 photoinitiator 0.3 parts in chloroform was prepared and placed into polypropylene mold and polymerized for ten min under UV lamp. A transparent, rubbery polymer disk was obtained with shear modulus of 220 kPa.

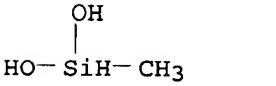
IT **324745-07-5P**
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(biomedical compns. preparation of intraocular **lenses**)

RN 324745-07-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with dimethylsilanediol and methylsilanediol, graft (9CI) (CA INDEX NAME)

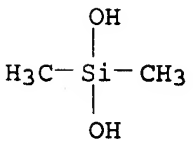
CM 1

CRN 43641-90-3
CMF C H6 O2 Si



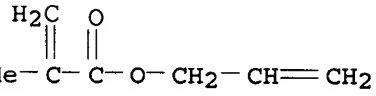
CM 2

CRN 1066-42-8
CMF C2 H8 O2 Si



CM 3

CRN 96-05-9
CMF C7 H10 O2



IC ICM A61F002-14
ICS A61F002-16; C08G077-38; C08G077-388
CC 63-7 (Pharmaceuticals)
IT 324745-04-2P 324745-05-3P 324745-06-4P **324745-07-5P**
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(biomedical compns. preparation of intraocular **lenses**)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 19 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:616679 HCAPLUS
DOCUMENT NUMBER: 133:208754
TITLE: Transparent (meth)acrylic polymer **compositions** with good water resistance and low birefringence
INVENTOR(S): Nishida, Koji; Makino, Takayuki; Tokimitsu, Akira
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000239325	A2	20000905	JP 1999-46764	199902

24
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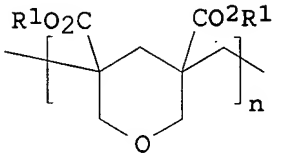
PRIORITY APPLN. INFO.: JP 1999-46764
199902
24
<--

GI



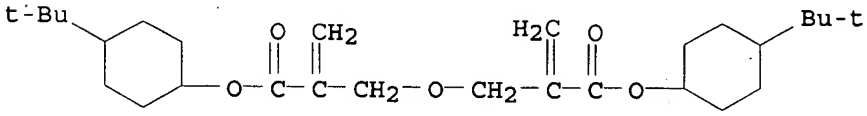
I

AB The compns., useful for lenses, optical disks, etc., comprise polymers having tetrahydropyran ring-containing unit I [R1 = H, C1-25 (alicyclic or substituted) hydrocarbyl; n >0] and (meth)acrylic polymers. Thus, bis(4-tert-butylcyclohexyl) 2,2'-[oxybis(methylene)]bis-2-propenoate (prepared from 4-tert-butylcyclohexyl acrylate and paraformaldehyde) was polymerized at 110° for 7 h in the presence of Pertetra A (polymerization initiator) to give a polymer with Mn 70,000 and Tg 204°, which was kneaded with equal weight of Acrypet VH (methacrylic polymer), pelletized, and injection-molded to give a test piece with Vicat softening point (ASTM D1525) 155°, saturated water absorption 0.9% after 60-day storage in water at 60°, and birefringence at 546 nm 60 + 10-6.

IT **248274-52-4P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tetrahydropyran ring structure-having polymers for **transparent** (meth)acrylic polymer compns. with good water resistance for **optical** materials)

RN 248274-52-4 HCAPLUS

CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, bis[4-(1,1-dimethylethyl)cyclohexyl] ester (9CI) (CA INDEX NAME)



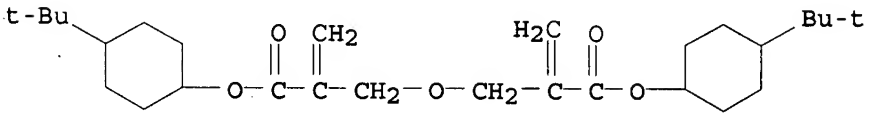
IT **248274-53-5P 275798-64-6P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**transparent** (meth)acrylic polymer compns. with good water resistance for **optical** materials)

RN 248274-53-5 HCAPLUS

CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, bis[4-(1,1-dimethylethyl)cyclohexyl] ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

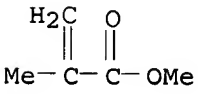
CM 1

CRN 248274-52-4
CMF C28 H46 O5



CM 2

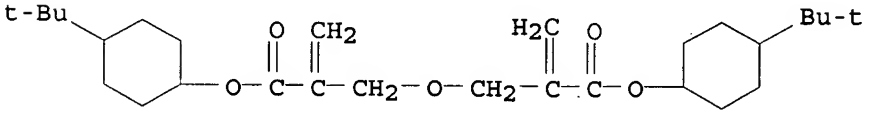
CRN 80-62-6
CMF C5 H8 O2



RN 275798-64-6 HCAPLUS
CN 2-Propenoic acid, 2,2'-[oxybis(methylene)]bis-, bis[4-(1,1-dimethylethyl)cyclohexyl] ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 248274-52-4
CMF C28 H46 O5



IC ICM C08F220-18
ICS C08G083-00
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 35, 73, 74
IT **248274-52-4P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tetrahydropyran ring structure-having polymers for **transparent** (meth)acrylic polymer compns. with good water resistance for **optical** materials)
IT 33941-07-0DP, Pyran, additives, polymers **248274-53-5P** **275798-64-6P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**transparent** (meth)acrylic polymer compns. with good water resistance for **optical** materials)

L51 ANSWER 20 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:426922 HCAPLUS
DOCUMENT NUMBER: 133:59576
TITLE: Methacrylic **compositions** containing multilayer acrylic copolymers for films with excellent transparency and weather resistance
INVENTOR(S): Hosonuma, Nobuyuki; Aihara, Sumio
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000178401	A2	20000627	JP 1998-359035	199812 17

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PRIORITY APPLN. INFO.: JP 1998-359035 199812 17

<--

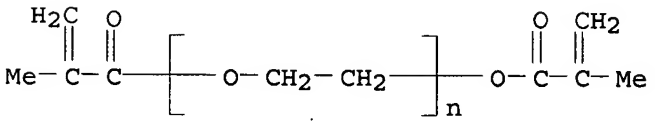
AB The compns. contain 50-80 parts multilayer copolymers having (A) innermost layers (glass-transition temperature, Tg, ≥25°) prepared by emulsion polymerization of 90-100% Me methacrylate (I) and other monomers, (B) middle layers prepared by emulsion polymerization of mixts. containing C2-8 alkyl acrylates (giving homopolymers with Tg ≤25°) 65-99.9, other monomers 0-30, multifunctional grafting agents 0-5, and multifunctional crosslinking agents 0.1-5%, and (C) outermost layers prepared by 2-4 stage emulsion polymerization of mixts. (giving polymers with Tg ≥25°) containing 80-99% I and other monomers in the presence of chain transfers and 50-20 parts copolymers prepared from 85-99.5% I and 15-0.5% C1-8 alkyl acrylates, where the monomer weight ratio of A:B:C is (5-20):(50-80):(15-45)%. Thus, 60 parts a multilayer graft copolymer comprising a 210:13:0.3 I-Bu acrylate (II)-allyl methacrylate (III) copolymer layer, a 1300:45:65 I-III-M 260 2 490:3.0 I-II copolymer layers was blended with 40 parts Delpet 720V (acrylic copolymer) and molded into a film showing tensile strength 320 kg/cm2, haze 2.5% after accelerated weathering for 500 h, and good clouding resistance.

IT **276887-95-7P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(multilayer acrylic graft copolymer-acrylic copolymer blends for **transparent** films with good weather and clouding resistance)

RN 276887-95-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

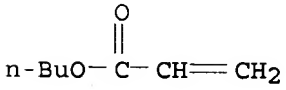
CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



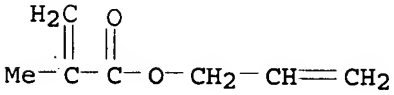
CM 2

CRN 141-32-2
CMF C7 H12 O2



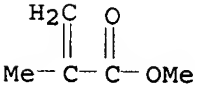
CM 3

CRN 96-05-9
CMF C7 H10 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08L051-00
ICS C08F265-06; C08L033-08
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
IT 111768-67-3P, Butyl acrylate-methyl methacrylate graft copolymer
276887-95-7P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(multilayer acrylic graft copolymer-acrylic copolymer blends for **transparent** films with good weather and clouding resistance)

L51 ANSWER 31 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:229013 HCAPLUS
DOCUMENT NUMBER: 128:244794
TITLE: Transparent thermoplastic resin **compositions** with improved impact resistance
INVENTOR(S): Aoyama, Taizo; Kimura, Katsuhiko
PATENT ASSIGNEE(S): Kaneka Corp., Japan; Kanegafuchi Chemical Ind.
SOURCE: Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

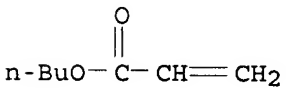
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 834535	A1	19980408	EP 1997-117133	19971002
			<--	
EP 834535	B1	20040922		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 10101869	A2	19980421	JP 1996-262788	19961003
			<--	
JP 3545548	B2	20040721		
TW 442539	B	20010623	TW 1997-86114110	19970926
			<--	
CN 1181395	A	19980513	CN 1997-120413	19970930
			<--	
PRIORITY APPLN. INFO.:			JP 1996-262788 A	19961003
			<--	

AB A thermoplastic resin composition exhibiting good impact resistance with maintaining excellent transparency, weather resistance and thermal stability comprises 30-99 weight% of a thermoplastic resin and 1-70 weight% of at least one of a composite rubber and graft copolymer. The composite rubber comprises an isobutylene polymer and vinyl polymer which are preferably entangled with each other so as not to be separated from each other; and the graft copolymer is prepared by graft-polymerizing a vinyl monomer with the composite rubber. The isobutylene polymer may have a reactive functional group on its mol. end and/or in its mol. chain and, if necessary, a moiety derived from a crosslinking agent and/or graft-linking agent. The vinyl polymer has a recurring unit derived from an acrylic acid ester and/or aromatic alkenyl compound and, if necessary, a moiety derived from the crosslinking agent and/or graft-linking agent, and the graft copolymer is prepared by graft-polymerizing a vinyl monomer with the composite rubber.
IT **198778-67-5P**, Allyl methacrylate-butene-butyl

acrylate-methyl methacrylate-2-methyl-1-propene graft copolymer copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(**transparent** thermoplastic resin compns. with improved impact resistance)
RN 198778-67-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butene, butyl 2-propenoate, 2-methyl-1-propene and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

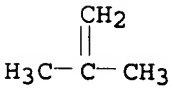
CM 1

CRN 141-32-2
CMF C7 H12 O2



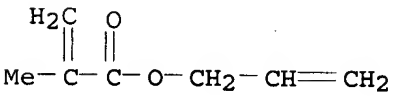
CM 2

CRN 115-11-7
CMF C4 H8



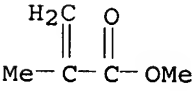
CM 3

CRN 96-05-9
CMF C7 H10 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2

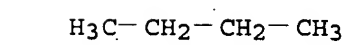


CM 5

CRN 25167-67-3
CMF C4 H8
CCI IDS

CM 6

CRN 106-97-8
CMF C4 H10



IC ICM C08L101-00
ICS C08F255-08; C08F285-00
CC 37-6 (Plastics Manufacture and Processing)
IT **198778-67-5P**, Allyl methacrylate-butene-butyl acrylate-methyl methacrylate-2-methyl-1-propene graft copolymer copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(**transparent** thermoplastic resin compns. with improved impact resistance)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 32 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:765343 HCAPLUS
DOCUMENT NUMBER: 128:35565
TITLE: Preparation of multilayer-structure acrylic polymers and impact-resistant transparent methacrylic polymer **compositions** containing them
INVENTOR(S): Nakauchi, Jun; Uno, Hiroyuki
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09309938	A2	19971202	JP 1996-150433	199605 23 <--
JP 3602262	B2	20041215		

PRIORITY APPLN. INFO.: JP 1996-150433 199605 23 <--

AB Title polymers are composed of 10-50 parts innermost layer polymers (A) prepared by polymerizing monomers containing C1-4 alkyl methacrylates in

the presence of water-soluble nonredox inorg. polymerization initiators, 20-60 parts intermediate layer polymers (B) prepared by polymerizing monomers containing (1) C1-8 alkyl acrylates, (2) aromatic vinyl monomers and/or arylalkyl acrylates, and (3) allyl, methacryl, or crotyl esters of α,β-unsatd. carboxylic acids in the presence of (A) and above initiators, and (C) 20-60 parts outermost layer polymers prepared by polymerizing monomers containing C1-4 alkyl methacrylates in the presence of A, B, and redox organic peroxide polymerization initiators (A + B + C = 100 parts). Methacrylic polymer compns. comprise 50-95% Me methacrylate-based rigid methacrylic polymers and 5-50% of the above polymers. Thus, 25 parts mixture [containing Me methacrylate (I) 95, Me acrylate (II) 5, 1,3-butylene glycol dimethacrylate (III) 2, and allyl methacrylate (IV) 0.04 part] was emulsion-polymerized in the presence of K2S2O8, then polymerized with 37.5 parts mixture (containing Bu acrylate 83, styrene 17, III 0.3, and IV 1.5 parts), and polymerized with 37.5 parts mixture (containing 95 parts I and 5 parts II) in the presence of cumene hydroperoxide to give a multilayer polymer, 40 parts of which was mixed with 60 parts 97.5:2.5 I-II copolymer and molded to give a test piece with good impact resistance and transparency.

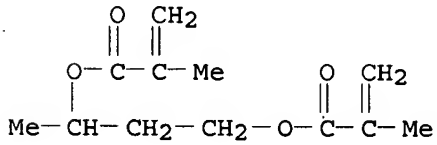
IT **150732-38-0P 199789-42-9P 199789-43-0P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(multilayer; preparation of multilayer acrylic polymers and impact-resistant **transparent** methacrylic resin compns. contg them)

RN 150732-38-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1,3-propanediyl ester, polymer with butyl 2-propenoate, ethenylbenzene, methyl 2-methyl-2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

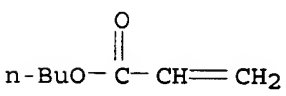
CM 1

CRN 1189-08-8
CMF C12 H18 O4



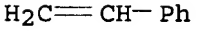
CM 2

CRN 141-32-2
CMF C7 H12 O2



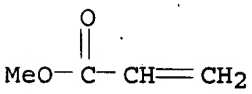
CM 3

CRN 100-42-5
CMF C8 H8



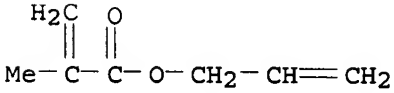
CM 4

CRN 96-33-3
CMF C4 H6 O2



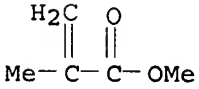
CM 5

CRN 96-05-9
CMF C7 H10 O2



CM 6

CRN 80-62-6
CMF C5 H8 O2



RN 199789-42-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, 1,2-ethanediylbis(oxy-2,1-ethanediyl) di-2-propenoate, ethenylbenzene, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

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CRN 1680-21-3
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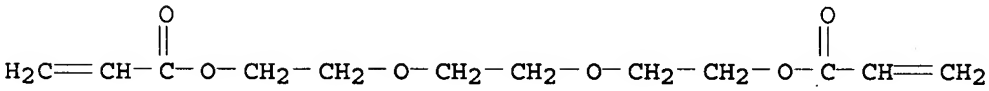
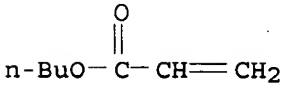


CM 2

CRN 141-32-2
CMF C7 H12 O2



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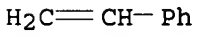
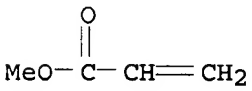
CRN 100-42-5
CMF C8 H8



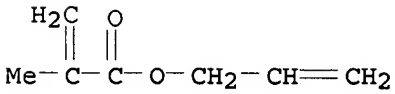
CM 4

CRN 96-33-3
CMF C4 H6 O2



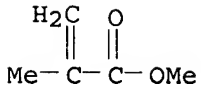
CM 5

CRN 96-05-9
CMF C7 H10 O2



CM 6

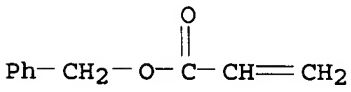
CRN 80-62-6
CMF C5 H8 O2



RN 199789-43-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1,3-propanediyl ester, polymer with butyl 2-propenoate, methyl 2-methyl-2-propenoate, methyl 2-propenoate, phenylmethyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

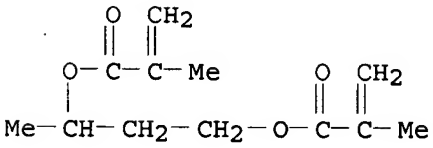
CM 1

CRN 2495-35-4
CMF C10 H10 O2



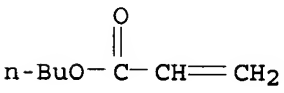
CM 2

CRN 1189-08-8
CMF C12 H18 O4



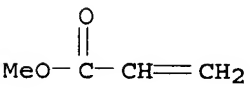
CM 3

CRN 141-32-2
CMF C7 H12 O2



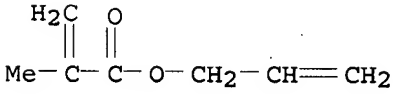
CM 4

CRN 96-33-3
CMF C4 H6 O2



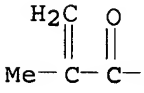
CM 5

CRN 96-05-9
CMF C7 H10 O2



CM 6

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F285-00
ICS C08F265-06; C08L033-08; C08L051-00
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 35, 38
IT **150732-38-0P 199789-42-9P 199789-43-0P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(multilayer; preparation of multilayer acrylic polymers and impact-resistant **transparent** methacrylic resin compns. contg them)

L51 ANSWER 33 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:718185 HCAPLUS
DOCUMENT NUMBER: 128:4347
TITLE: Transparent methacrylic resin **compositions** with good antistatic properties
INVENTOR(S): Hasegawa, Takao; Uno, Hirobumi; Matsumoto, Hiroyuki; Nakauchi, Jun
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09286890	A2	19971104	JP 1996-123920	199604 23

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PRIORITY APPLN. INFO.: JP 1996-123920

199604
23

<--

AB The compns. contain (a) Me methacrylate (I)-based copolymers (≥80% I content) 50-99.3, (b) polyethylene glycol (II) with number-average mol. weight (Mn) 3000-50,000 0.1-10, (c) C6-20 alkyl chain-containing alkylsulfonates or alkylbenzenesulfonates 0.1-10, and (d) acrylic graft copolymers 0.5-30. Thus, mixing 99:1 I-Me acrylate copolymer 90.5, II with Mn 4000 2, Na dodecylbenzenesulfonate 1.5, and graft copolymer (7-layer copolymer prepared from I, allyl methacrylate, Bu acrylate, and styrene) 6 parts, pelletizing, and injection-molding gave a transparent test piece showing no bleed out or whitening, good mech. properties, heat distortion temperature 90°, and good antistatic properties.

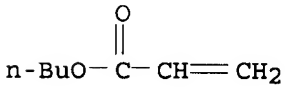
IT **110254-02-9P**, Allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(antistatic **transparent** methacrylic resin compns.)

RN 110254-02-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

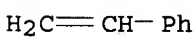
CM 1

CRN 141-32-2
CMF C7 H12 O2



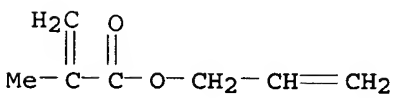
CM 2

CRN 100-42-5
CMF C8 H8



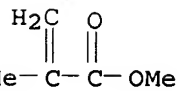
CM 3

CRN 96-05-9
CMF C7 H10 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08L033-12
ICS C08L033-12; C08F285-00; C08K005-42; C08L071-02; C08L051-00
CC 37-6 (Plastics Manufacture and Processing)
IT **110254-02-9P**, Allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(antistatic **transparent** methacrylic resin compns.)

L51 ANSWER 34 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:716039 HCAPLUS
DOCUMENT NUMBER: 128:4016
TITLE: Impact- and weather-resistant transparent multilayered graft copolymers and methacrylic resin **compositions** thereof
INVENTOR(S): Takigawa, Kazunori; Iguchi, Yuichi; Yamaguchi, Katsuki; Nagata, Masao
PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09286830	A2	19971104	JP 1996-122404	199604 19
			<--	
JP 3464097	B2	20031105		
PRIORITY APPLN. INFO.:			JP 1996-122404	199604 19
			<--	

AB Title copolymers with good gloss, processability, and mech. strength are manufactured by (i) polymerizing (A) 40-100 parts C1-4 alkyl methacrylates, (B) 0-60 parts ≥1 monomers selected from C1-12 alkyl acrylates, aromatic monomers, and other monomers, and (C) 0.01-10 parts (per 100 parts total of A and B) polyfunctional monomers by using nonionic organic peroxides, (ii) polymerizing 35-70 parts monomer mixts. comprising (D) 60-100 parts C1-12 alkyl acrylates, (E) 0-40 parts ≥1 monomers selected from aromatic monomers and other monomers, and (F) 0.1-5 parts (per 100 parts total of D and E) polyfunctional monomers by using ionic and/or OH-containing organic peroxides in the presence of 10-40 parts of the crosslinked polymers

obtained in the previous process, then (iii) polymerizing 10-40 parts monomers comprising (G) 60-100 parts C1-4 alkyl methacrylates and (H) 0-40 parts ≥1 monomers selected from C1-12 alkyl acrylates and other monomers by using ionic and/or OH-containing organic peroxides in the presence of 60-90 parts of the rubber polymers obtained in the above process. Compns. comprising 55-95% methacrylic resins and 5-45% the multilayered graft polymers are also claimed. Thus, Me methacrylate (I) 96, Bu acrylate (II) 4, and allyl methacrylate (III) 0.4 part were polymerized in the presence of tert-Bu hydroperoxide, the mixture was then grafted with II 82, styrene 18, and III 1.5 parts in the presence of $K_2S_2O_8$, and further treated with 96 parts I and 4 parts II in the presence of $K_2S_2O_8$ to give a multilayered graft copolymer. The copolymer (40 parts) was melt kneaded with 60 parts MG 102 (2:98 Et acrylate-I copolymer) to give a composition showing light transmittance 92.0%, Haze 1.3%, and Gardener impact strength 85 kg-cm.

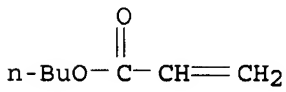
IT **110254-02-9P**, Allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of impact- and weather-resistant **transparent** multilayered graft copolymers)

RN 110254-02-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

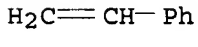
CM 1

CRN 141-32-2
CMF C7 H12 O2



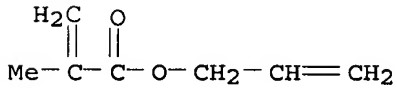
CM 2

CRN 100-42-5
CMF C8 H8



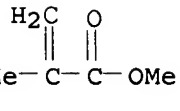
CM 3

CRN 96-05-9
CMF C7 H10 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F285-00
ICS C08F004-34; C08L033-10; C08F285-00; C08F220-12; C08L051-00
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37
IT **110254-02-9P**, Allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of impact- and weather-resistant **transparent** multilayered graft copolymers)

L51 ANSWER 35 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:270545 HCAPLUS
DOCUMENT NUMBER: 126:251931
TITLE: Transparent thermoplastic **compositions** containing core-shell multilayer particles
INVENTOR(S): Haino, Hideaki; Hoshiba, Takao; Ootani, Mitsuo
PATENT ASSIGNEE(S): Kuraray Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09048922	A2	19970218	JP 1995-219575	19950804
			<--	
JP 3563166	B2	20040908		
PRIORITY APPLN. INFO.:			JP 1995-219575	19950804
			<--	

AB The compns., for preparation of products having good impact resistance, comprise thermoplastics containing multilayer core-shell particles having rubber (nR23) and polymer (nP23) phase refractive indexes satisfied with given conditions, where the particles are prepared by emulsion polymerization of alkyl acrylates, multifunctional monomers and other monomers. Thus, an extrude from a mixture of 2 parts 3-layer graft copolymer particles (nR 23 1.4905, nP23 1.4896) prepared from emulsion polymerization of allyl methacrylate, Bu acrylate, Me acrylate, MMA and styrene and 3 parts Parapet HR-L (acrylic polymer) showed

Izod impact 4.3 kg-cm/cm and haze 92.6% and 91.8%, vs., 23° and 70°, resp.

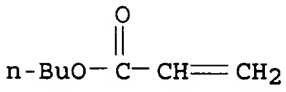
IT **110254-00-7P**, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer **188665-83-0P**, Allyl methacrylate-benzyl methacrylate-butyl acrylate-2-ethylhexyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(particles; **transparent** thermoplastic compns. containing core-shell multilayer particles)

RN 110254-00-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

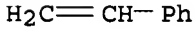
CM 1

CRN 141-32-2
CMF C7 H12 O2



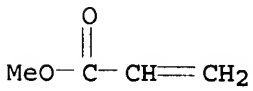
CM 2

CRN 100-42-5
CMF C8 H8



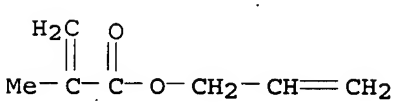
CM 3

CRN 96-33-3
CMF C4 H6 O2



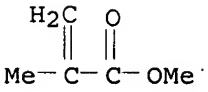
CM 4

CRN 96-05-9
CMF C7 H10 O2



CM 5

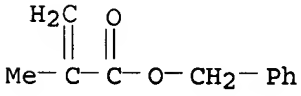
CRN 80-62-6
CMF C5 H8 O2



RN 188665-83-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-ethylhexyl 2-propenoate, methyl 2-propenoate, phenylmethyl 2-methyl-2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

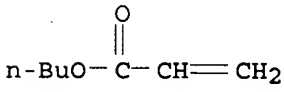
CM 1

CRN 2495-37-6
CMF C11 H12 O2



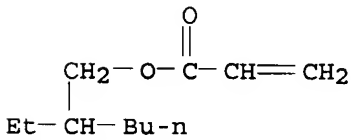
CM 2

CRN 141-32-2
CMF C7 H12 O2



CM 3

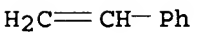
CRN 103-11-7
CMF C11 H20 O2



CM 4

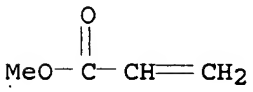
CRN 100-42-5

CMF C8 H8



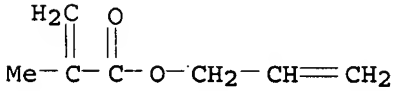
CM 5

CRN 96-33-3
CMF C4 H6 O2



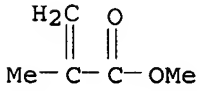
CM 6

CRN 96-05-9
CMF C7 H10 O2



CM 7

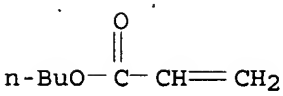
CRN 80-62-6
CMF C5 H8 O2



IT **110254-02-9P**, Allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(**transparent** thermoplastic compns. containing core-shell multilayer particles)
RN 110254-02-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

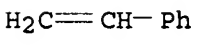
CM 1

CRN 141-32-2
CMF C7 H12 O2



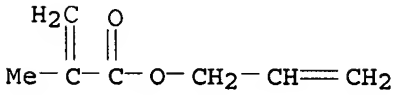
CM 2

CRN 100-42-5
CMF C8 H8



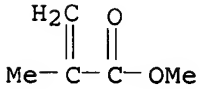
CM 3

CRN 96-05-9
CMF C7 H10 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08L101-12
ICS C08L033-08; C08L051-04
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 35
IT **110254-00-7P**, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer
188665-83-0P, Allyl methacrylate-benzyl methacrylate-butyl acrylate-2-ethylhexyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(particles; **transparent** thermoplastic compns. containing core-shell multilayer particles)
IT **110254-02-9P**, Allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(**transparent** thermoplastic compns. containing core-shell multilayer particles)

L51 ANSWER 51 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:186008 HCAPLUS
DOCUMENT NUMBER: 102:186008
TITLE: Impact-resistant molding compositions
INVENTOR(S): Arndt, Peter Joseph; Ludwig, Walter; Munzer, Manfred; Siol, Werner; Wenzel, Franz
PATENT ASSIGNEE(S): Rohm G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 33 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3329765	A1	19850228	DE 1983-3329765 <--	19830818
DE 3329765	C2	19931014		
FR 2550793	A1	19850222	FR 1984-9857 <--	19840622
FR 2550793	B1	19880729		
US 4521567	A	19850604	US 1984-637863 <--	19840806
GB 2148908	A1	19850605	GB 1984-20846 <--	19840816
GB 2148908	B2	19870218		
JP 60060119	A2	19850406	JP 1984-171014 <--	19840818
JP 05043727	B4	19930702		
PRIORITY APPLN. INFO.:			DE 1983-3329765 A <--	19830818

AB Methyl methacrylate (I) or a mixture of I and ≥1 other (meth)acrylate ester is polymerized in the presence of an oil-soluble radical initiator and a regulator containing ≥2 thiol groups/mol. to give a hard polymer phase (glass temperature >25°), and a monomer mixture containing a crosslinking monomer is graft polymerized on the hard phase to give a soft phase (glass temperature <25°). The resulting polymer has good impact strength and transparency. Thus, a mixture of I 427, (HSCH2CO2CH2)4C [10193-99-4] 3, and dilauroyl peroxide 6 g was heated to 70° to prepare polymer beads. A mixture of Bu acrylate 210, styrene 45.5, I 17.5, and allyl methacrylate 3.5 g was added at 70° and polymerized at 70-90°. The resulting polymer (2 parts) was mixed with 1 part poly(Me methacrylate) [9011-14-7] to prepare a blend which gave moldings have Vicat softening temperature 95°, impact strength 87

kJ/m2 (DIN 53453), and good transparency.

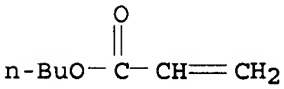
IT **51252-07-4P**
RL: PREP (Preparation)
(preparation of impact-resistant, **transparent**)

RN 51252-07-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

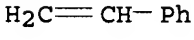
CM 1

CRN 141-32-2
CMF C7 H12 O2



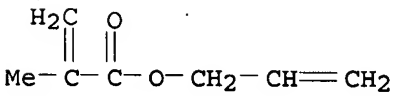
CM 2

CRN 100-42-5
CMF C8 H8



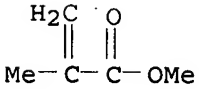
CM 3

CRN 96-05-9
CMF C7 H10 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F220-14
ICS C08F220-18; C08F265-04; C08F265-06; C08L033-06; C08L051-00; C08F002-12; C08F002-38

CC 37-3 (Plastics Manufacture and Processing)

IT **51252-07-4P** 92674-58-3P 96387-27-8P

RL: PREP (Preparation)
(preparation of impact-resistant, **transparent**)

L51 ANSWER 52 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1982:21416 HCAPLUS
DOCUMENT NUMBER: 96:21416
TITLE: Polymer of acrylic acid oligomer and its use in coating and/or impregnating **compositions**
INVENTOR(S): Merritt, Richard Foster; Larsson, Bjorn Eric
PATENT ASSIGNEE(S): Rohm and Haas Co., USA
SOURCE: Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 36294	A2	19810923	EP 1981-301029	198103 12
			<--	
EP 36294	A3	19811028		
R: BE, CH, DE, FR, GB, IT, NL, SE				
US 4359564	A	19821116	US 1980-130323	198003 14
			<--	
CA 1172795	A1	19840814	CA 1981-372406	198103 05
			<--	
AU 8168350	A1	19810917	AU 1981-68350	198103 13
			<--	
JP 56141306	A2	19811105	JP 1981-37178	198103 14
			<--	
ZA 8101707	A	19820428	ZA 1981-1707	198103 16
			<--	
PRIORITY APPLN. INFO.:			US 1980-130323 A	198003 14
			<--	

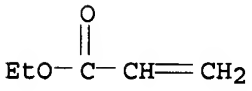
AB Acrylic acid oligomers with d.p. 2-11, prepared by emulsion or solution polymerization, are useful in modifying the glass temperature of copolymers for coating or impregnation compns. Thus, the glass temperature of acrylic acid-Et acrylate copolymer [25085-35-2] prepared from 88:12 and 52:48 Et acrylate-oligo(acrylic acid) is -14 and -24°, resp.

IT **55644-71-8P**
RL: PREP (Preparation)
(manufacture of, from oligo(acrylic acid), **glass** temperature in relation to)

RN 55644-71-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

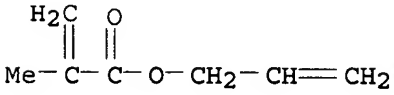
CM 1

CRN 140-88-5
CMF C5 H8 O2



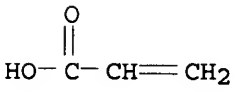
CM 2

CRN 96-05-9
CMF C7 H10 O2



CM 3

CRN 79-10-7
CMF C3 H4 O2



IC C08F020-28
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 40
IT 25085-35-2P **55644-71-8P**
RL: PREP (Preparation)
(manufacture of, from oligo(acrylic acid), **glass** temperature in relation to)

L51 ANSWER 53 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1979:478926 HCAPLUS
DOCUMENT NUMBER: 91:78926
TITLE: Polysiloxane **composition** for contact lenses
PATENT ASSIGNEE(S): Bausch and Lomb Inc., USA
SOURCE: Neth. Appl., 40 pp.
CODEN: NAXXAN
DOCUMENT TYPE: Patent
LANGUAGE: Dutch
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 7807833	A	19790129	NL 1978-7833	197807 24
			<--	
NL 184053	B	19881101		
NL 184053	C	19890403		
US 4153641	A	19790508	US 1978-878831	197802 21
			<--	
GB 1604519	A	19811209	GB 1978-22769	197805 25
			<--	
DK 7802370	A	19790126	DK 1978-2370	197805 29
			<--	
DK 156853	B	19891009		
DK 156853	C	19900219		
NO 7801853	A	19790126	NO 1978-1853	197805 29
			<--	
NO 152794	B	19850812		
NO 152794	C	19851120		
SE 7806122	A	19790126	SE 1978-6122	197805 29
			<--	
SE 443665	B	19860303		
AU 7836580	A1	19791206	AU 1978-36580	197805 29
			<--	
AU 520092	B2	19820114		
CA 1102484	A1	19810602	CA 1978-305264	197806 12
			<--	
BE 868504	A1	19781016	BE 1978-188878	197806 27
			<--	
DE 2829367	A1	19790208	DE 1978-2829367	197807 04
			<--	
BR 7804596	A	19790417	BR 1978-4596	197807 17
			<--	
CH 643367	A	19840530	CH 1978-7846	197807 20

<--

JP 54024047 A2 19790223 JP 1978-90046
197807
25

<--

JP 60028329 B4 19850704

PRIORITY APPLN. INFO.: US 1977-818783 A
197707
25

<--

US 1978-878831 A
197802
21

<--

AB A contact lens with a sufficient O transport capacity, free from fillers, stable to hydrolysis, inert, and transparent contains a polysiloxane with its end groups bound to an unsatd. group. Thus [HO(CH2)4SiMe2]2O [5931-17-9] was treated with CH2:CMeCOCl [920-46-7] to give [CH2:CMeCO2(CH2)4SiMe2]2O [70877-11-1], which was copolymd. with octamethylcyclotetrasiloxane to give a polysiloxane CH2:CMeCO2(CH2)4SiMe2O(SiMe2O)nSiMe2(CH2)4O2CCMe:CH2 (n = .apprx.260). The polymer was crosslinked with a peroxide initiator to give a clear, elastic contact lens blank.

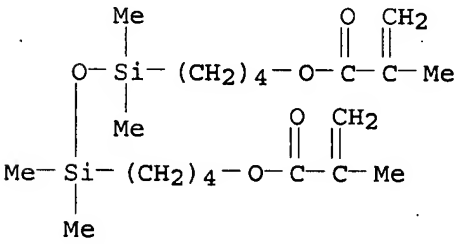
IT **70877-13-3P**
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, for contact lenses)

RN 70877-13-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with octamethylcyclotetrasiloxane and (1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-4,1-butanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

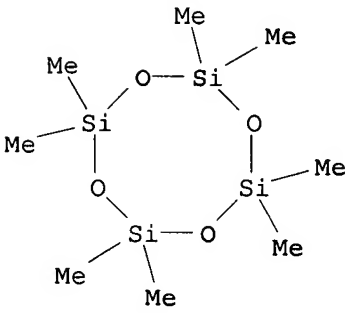
CM 1

CRN 70877-11-1
CMF C20 H38 O5 Si2



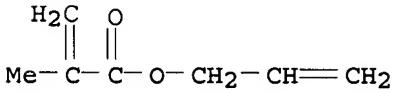
CM 2

CRN 556-67-2
CMF C8 H24 O4 Si4



CM 3

CRN 96-05-9
CMF C7 H10 O2



IC B29D011-00; C08J005-00; G02B007-04
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35
IT 70877-12-2P **70877-13-3P** 70877-14-4P
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, for contact **lenses**)

L51 ANSWER 54 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1978:122119 HCAPLUS
DOCUMENT NUMBER: 88:122119
TITLE: Polymer **composition** with multilayer structure
INVENTOR(S): Kishida, Kazuo; Hasegawa, Akira; Mohri, Hiroshi
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Ger. Offen., 41 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2728618	A1	19771229	DE 1977-2728618	19770624 <--
DE 2728618	C2	19870129		
JP 53001287	A2	19780109	JP 1976-75302	19760625 <--

JP 59038246	B4	19840914		
AU 7726032	A1	19781214	AU 1977-26032	197706 10
			<--	
AU 511392	B2	19800814		
CA 1102940	A1	19810609	CA 1977-280573	197706 15
			<--	
GB 1550294	A	19790808	GB 1977-26837	197706 27
			<--	
US 4173600	A	19791106	US 1978-963733	197811 27
			<--	
PRIORITY APPLN. INFO.:			JP 1976-75302 A	197606 25
			<--	
			US 1977-807642 A2	197706 17
			<--	

AB Transparent plastics with good resistance to stress whitening and suitability for use as impact modifiers for other plastics are prepared by graft emulsion polymerization of styrene and(or) butadiene with 2 di- or trienes using 4-7 polymerization steps so that layers (including rubbery and intermediate layers) are formed in the course of polymerization The core, rubbery, intermediate, and outer layers account for 5-35, 5-55, 10-70, and 5-45%, resp., of the total polymer and have glass transition temps. ≥10°, ≤0°, -, and ≥50°, resp. Thus, a mixture of water 200, K soap 1.2, FeSO4.7H2O 0.003, Na pyrophosphate 0.3, dextrose 0.4, styrene 10, divinylbenzene 0.3, allyl methacrylate 0.1, and cumene hydroperoxide was stirred 2 h at 55° to provide the core polymer. The next layer was provided by styrene 9, butadiene 6, and divinylbenzenes 0.01 part, the third by styrene 6, butadiene 9, and divinylbenzene 0.01 part, the fourth (rubbery layer) by 15 parts butadiene and 0.01 part divinylbenzene, the fifth by the same components and amts. as the third layer, the sixth by the same components and amts. as the second layer, and the last by 15 parts styrene and 0.03 part n-octyl mercaptan. The resulting graft quaterpolymer [65917-14-8] had excellent formabiliy (into 100μ film), transparency (5.1% haze) and stress whitening resistance. Comparison 70:30 styrene-butadiene polymers prepared in 1-5 stages had poorer properties and 12-57% haze.

IT **53212-46-7P 65917-12-6P 65917-14-8P**
RL: PREP (Preparation)
(graft, **transparent**, multistep emulsion polymerization in manufacture of)

RN 53212-46-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with diethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 1321-74-0

CMF C10 H10
CCI IDS

2 [D1—CH═CH$_2$]

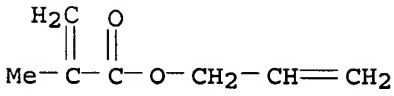
CM 2

CRN 100-42-5
CMF C8 H8

H_2C═CH—Ph

CM 3

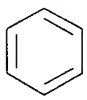
CRN 96-05-9
CMF C7 H10 O2



RN 65917-12-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with 1,3-butadiene and diethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 1321-74-0
CMF C10 H10
CCI IDS



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CM 2

CRN 106-99-0
CMF C4 H6

CM 3

CRN 96-05-9
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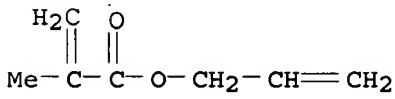
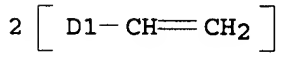


RN 65917-14-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with 1,3-butadiene, diethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 1321-74-0
CMF C10 H10
CCI IDS



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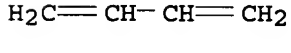

CM 3

CRN 100-42-5

CMF C8 H8

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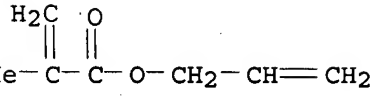
CM 4

CRN 96-05-9
CMF C7 H10 O2



IC C08F285-00
CC 36-3 (Plastics Manufacture and Processing)
IT **53212-46-7P** 65759-01-5P 65759-02-6P **65917-12-6P**
65917-13-7P **65917-14-8P**
RL: PREP (Preparation)
(graft, **transparent**, multistep emulsion polymerization in manufacture of)

L51 ANSWER 55 OF 55 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:13727 HCAPLUS
DOCUMENT NUMBER: 68:13727
TITLE: Fluid, nonplasticized vinyl chloride polymer **compositions** for preparing reinforced thermosetting polymers
INVENTOR(S): Bruce, John P.
PATENT ASSIGNEE(S): Dow Chemical Co.
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3354112		19671121	US 1965-42791	196501 25

<--

AB The title compns. are prepared by polymerizing a mixture containing vinyl chloride (I) 12-60, monovinyl aromatic compds. 6-15, polyethylenically unsatd. monomers 1-5, acrylonitrile (II) 1-5, and nonpolymerizable organic solvents 15-80 weight % to substantial completion in the presence of catalytic amts. of a free-radical initiating agent. The fluid composition is converted to a rigid, thermoset polymer on substantial removal of the solvent and subsequent treatment of the residue at 135°/135-550 psi. during 30 min. Thus, I 9500, styrene 1500, allyl acrylate 750, II 750, Me2CO 5000, and azobisisobutyronitrile 50 g. was purged with N, sealed, and heated to 81° during 14 hrs. to give an essentially linear,

Me2CO-soluble polymer with 95% monomer conversion. The reactor was heated 30 min. at 45°/15-20 mm. to remove unreacted vinyl chloride, the solution diluted to 34.71% solids with Me2CO and poured onto a glass mat, and the impregnated mat air dried 24 hrs. and laminated in a hydraulic press at 150°/300 psi. during 30 min. to give a self-extinguishing laminate having flexural strength 47,800 psi. and flexural modulus 2.1 + 106 (ASTM D 790-59T).

IT **29615-64-3P**, uses and miscellaneous
RL: PREP (Preparation); USES (Uses)
(**glass** fiber-reinforced, manufacture of)

RN 29615-64-3 HCAPLUS

CN Acrylic acid, allyl ester, polymer with acrylonitrile, chloroethylene and styrene (8CI) (CA INDEX NAME)

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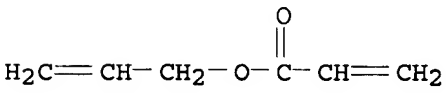
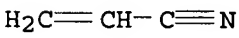
CRN 999-55-3
CMF C6 H8 O2



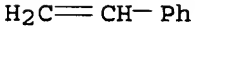
CM 2

CRN 107-13-1
CMF C3 H3 N



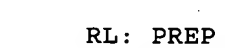
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

CRN 75-01-4
CMF C2 H3 Cl



RL: PREP (Preparation)
(with allyl acrylate, chloroethylene and styrene **glass** fiber-reinforced

INCL 260032800

CC 36 (Plastics Manufacture and Processing)
IT **29615-64-3P**, uses and miscellaneous
RL: PREP (Preparation); USES (Uses)
(**glass** fiber-reinforced, manufacture of)
IT **29615-64-3P**, preparation
RL: PREP (Preparation)
(with allyl acrylate, chloroethylene and styrene **glass** fiber-reinforced)

I or II


```
=> fil reg
FILE 'REGISTRY' ENTERED AT 16:00:58 ON 29 NOV 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)


=> d his nofile

     (FILE 'HOME' ENTERED AT 09:12:59 ON 29 NOV 2006)

     FILE 'HCAPLUS' ENTERED AT 09:14:57 ON 29 NOV 2006
L1             1 SEA US2006052564/PN

     FILE 'REGISTRY' ENTERED AT 09:16:11 ON 29 NOV 2006
L2             3 SEA (23851-16-3/BI OR 849671-67-6/BI OR 849671-68-7/BI)
L3               STR
L4            50 SEA SSS SAM L3
L5          1117 SEA SSS FUL L3
                 SAV L5 BER823/A
L6             2 SEA L2 AND L5
L7               STR
L8             4 SEA SUB=L5 SSS SAM (L3 AND L7)
L9               STR
L10              STR L9
L11            5 SEA SUB=L5 SSS SAM (L3 AND L10)
L12              STR
L13            5 SEA SUB=L5 SSS SAM (L3 AND L12)
L14              STR
L15           15 SEA SUB=L5 SSS SAM (L3 AND L14)
L16              SCR 1313
L17            0 SEA SUB=L5 SSS SAM (L14 AND L3 NOT L16)
L18              STR L14
L19            0 SEA SUB=L5 SSS SAM (L18 AND L3)
L20           46 SEA SSS SAM L18
L21            2 SEA SUB=L5 SSS FUL (L18 AND L3)
                 SAV L21 BER823S1/A
L22            2 SEA L2 AND L21
L23            8 SEA SUB=L5 SSS FUL (L14 AND L3 NOT L16)
L24            0 SEA L2 AND L23

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L27           50 SEA SSS SAM L14 NOT L16
L28           46 SEA SSS SAM L18
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                 SAV L29 BER823A/A
L30            2 SEA L2 AND L29

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L31          286 SEA L5
L32         6376 SEA L29
L33              QUE OPTICAL?
L34              QUE TRANSPARENT?
L35              QUE EYEGLASS? OR EYE(W)GLASS? OR GLASS? OR LENS##
L36          170 SEA L5 (L) (L33 OR L34 OR L35)
L37          498 SEA L32 (L) (L33 OR L34 OR L35)
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L38           2 SEA L36 AND L37
L39         133 SEA L5/P (L) (L33 OR L34 OR L35)
L40         263 SEA L29/P (L) (L33 OR L34 OR L35)
L41           2 SEA L39 AND L40

     FILE 'REGISTRY' ENTERED AT 15:32:45 ON 29 NOV 2006
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L43           1 SEA SUB=L5 SSS SAM L42
L44          38 SEA SUB=L5 SSS FUL L42
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L45        1079 SEA L5 NOT L44

     FILE 'HCAPLUS' ENTERED AT 15:37:10 ON 29 NOV 2006
L46           1 SEA L41 NOT L1
L47             QUE MIXTURE? OR BLEND? OR COMPOSIT? OR COMPN# OR COMPSN#
                OR FORMULAT?
L48         102 SEA L47 AND L40
L49     1057619 SEA (MIXTURE?/TI OR BLEND?/TI OR COMPOSIT?/TI OR
                COMPN#/TI OR COMPSN#/TI OR FORMULAT?/TI)
L50          67 SEA L40 AND L49
L51          55 SEA L50 AND (1840-2003)/PY,PRY
L52          11 SEA L44/P (L) (L33 OR L34 OR L35)
L53         126 SEA L45/P (L) (L33 OR L34 OR L35)
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L55          37 SEA L54 AND (1840-2003)/PY,PRY


=> d l21 que stat
L3              STR
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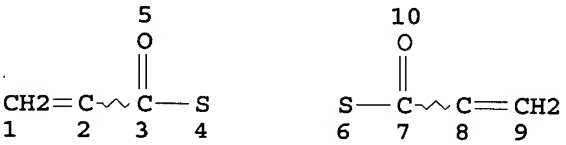


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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  10

STEREO ATTRIBUTES: NONE
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L18             STR
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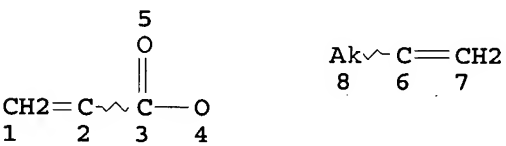


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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
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NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
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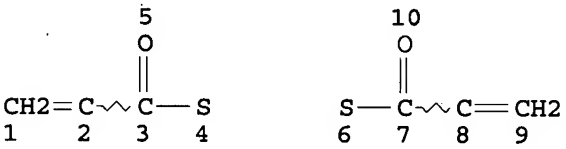
L3 STR



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DEFAULT ECLEVEL IS LIMITED

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STEREO ATTRIBUTES: NONE
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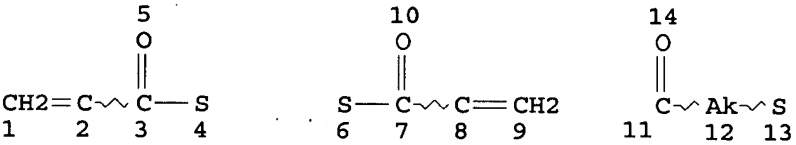

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NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 952 ITERATIONS 38 ANSWERS
SEARCH TIME: 00.00.01

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L52 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:60569 HCAPLUS

DOCUMENT NUMBER: 140:112149
TITLE: Dithiol diacrylates used for production of highly transparent plastics for optical materials
INVENTOR(S): Schmitt, Bardo; Knebel, Joachim; Hartmann, Patrik
PATENT ASSIGNEE(S): Roehm GmbH & Co. KG, Germany
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004007575	A1	20040122	WO 2003-EP6271	200306 13
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10316671	A1	20040122	DE 2003-10316671	200304 10
CA 2492206	AA	20040122	CA 2003-2492206	200306 13
AU 2003242703	A1	20040202	AU 2003-242703	200306 13
EP 1525234	A1	20050427	EP 2003-763638	200306 13
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005154161	A1	20050714	US 2003-509328	200306 13
CN 1653095	A	20050810	CN 2003-810734	200306 13
JP 2005533882	T2	20051110	JP 2004-520394	200306 13

PRIORITY APPLN. INFO.: DE 2002-10231869 A 200207 12
DE 2003-10316671 A

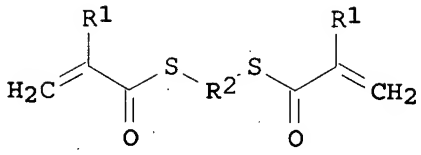
200304
10

WO 2003-EP6271 W

200306
13

OTHER SOURCE(S): MARPAT 140:112149

GI



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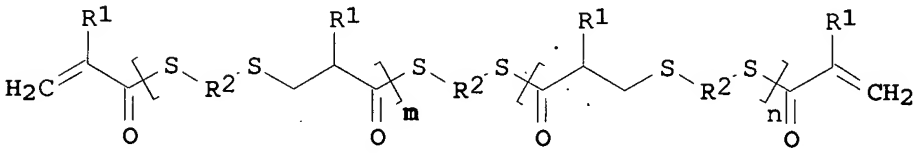


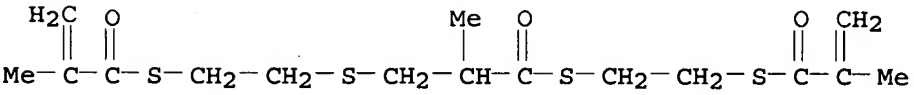
II

AB A mixture comprises dithiol diacrylates of the general formulas I and II, where R1 substituents are independently hydrogen or Me group, R2 groups are independently linear or branched, aliphatic or cycloaliph. groups, or substituted or unsubstituted aromatic or heteroarom. groups, m and n are whole nos. ≥ 0, and the total of m and n is > 0. The mixture comprises > 10% mol of the compds. of formula II with m+n=2, and the mixture is produced by reacting 1.0-2.0 mol of a compound CH2=C(R1)-C(O)-X, X being -Cl, -OC(O)C(R1)=CH2, or -CH2OC(O)C(R1)=CH2, with 1 mol of at least one polythiol M-S-R2-S-M, M being hydrogen or a metal cation, in an organic solvent. The mixture of the dithiol diacrylates is used for production of highly transparent polymers for manufacture of optical materials, such as optical lenses and ophthalmic lenses. Thus, 1,2-ethylenedithiol (1 mol) was stirred with NaOH solution (13%, 1.76 mol), the sodium thiolate solution was added with methacrylic anhydride (1.52 mol) into Et acetate-water over 45 min, the reaction mixture was stirred for 2 h at 40° and then cooled to 25°. The recovered reaction mixture contained 1,2-ethylenedithiol dimethacrylate (37.9), and the compds. of the formula II with m+n=1 (37.5), m+n=2 (13.2), and m+n=3 (5.9% mol), R1 being Me, and R2 being 1,2-ethylene. The composition contained < 1% mol of methacrylic anhydride and was used for production of transparent polymers by radical polymerization

IT **333722-25-1DP**, polymers with acrylate-terminated polythioester-polythioethers
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dithiol diacrylates used for production of highly **transparent** plastics for **optical** materials)

RN 333722-25-1 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-[(2-methyl-1-oxo-1,3-propanediyl)bis(thio-2,1-ethanediyl)] ester (9CI) (CA INDEX NAME)



IC ICM C08F022-10
ICS G02B001-04; C07C323-12
CC 37-2 (Plastics Manufacture and Processing)
Section cross-reference(s): 63
IT 117675-95-3DP, polymers with acrylate-terminated polythioester-polythioethers 158687-59-3DP, acrylate-terminated, polymers with dithiol diacrylates **333722-25-1DP**, polymers with acrylate-terminated polythioester-polythioethers
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dithiol diacrylates used for production of highly **transparent** plastics for **optical** materials)
IT 117675-95-3P **333722-25-1P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(dithiol diacrylates used for production of highly **transparent** plastics for **optical** materials)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:417522 HCAPLUS
DOCUMENT NUMBER: 139:7676
TITLE: Radical-polymerizable compositions for manufacture of impact-resistant eyeglass lenses
INVENTOR(S): Richard, Gilles; Primel, Odile; Yean, Leanirith
PATENT ASSIGNEE(S): Essilor International Compagnie Generale d'Optique, Fr.
SOURCE: Fr. Demande, 30 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2832717	A1	20030530	FR 2001-15273	200111 26
FR 2832717	B1	20040709		
WO 2003046028	A1	20030605	WO 2002-FR4050	200211 26

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,

BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002364405	A1	20030610	AU 2002-364405	200211 26
EP 1453874	A1	20040908	EP 2002-799758	200211 26
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005510594	T2	20050421	JP 2003-547475	200211 26
US 2005107537	A1	20050519	US 2003-496743	200211 26
PRIORITY APPLN. INFO.:			FR 2001-15273 A	200111 26
			WO 2002-FR4050 W	200211 26

AB Compns. for the title use are based on (A) containing ≥15% (based on components A and B) oligomer having ≥2 radical-polymerizable groups that (co)polymerize to products with glass temperature <50° and (B) ≥1 (meth)acrylic monomer having a group that promotes H bonding at concns. ≥15 or 35% (based on components A and B) when this monomer is methacrylic or acrylic, resp. A typical composition contained ethoxylated bisphenol A dimethacrylate (d.p. 30) 60, methacrylic acid 40, and photopolymn. initiator 0.1 parts.

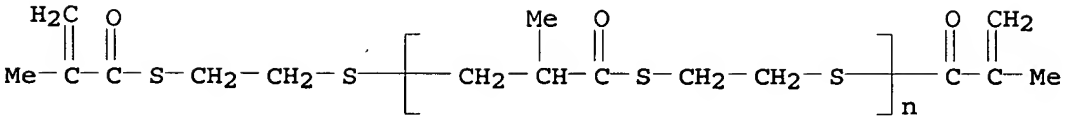
IT **496045-26-2P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radical-polymerizable compns. for manufacture of impact-resistant **eyeglass lenses**)

RN 496045-26-2 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and α-(2-methyl-1-oxo-2-propenyl)-ω-[[2-[(2-methyl-1-oxo-2-propenyl)thio]ethyl]thio]poly[thio-1,2-ethanediylthio(2-methyl-1-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

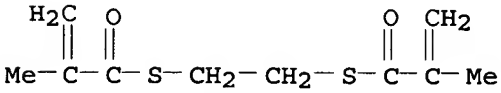
CM 1

CRN 393137-65-0
CMF (C6 H10 O S2)n C10 H14 O2 S2
CCI PMS



CM 2

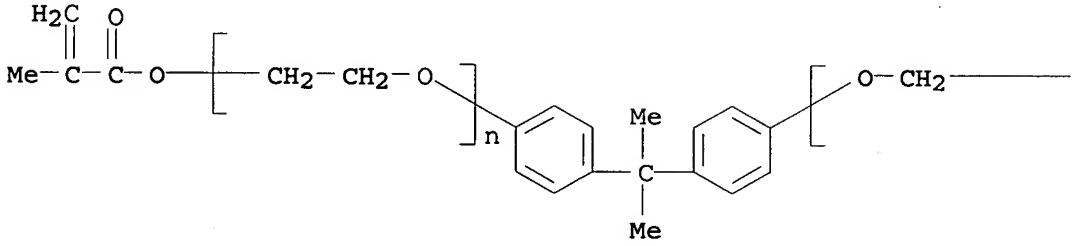
CRN 117675-95-3
CMF C10 H14 O2 S2



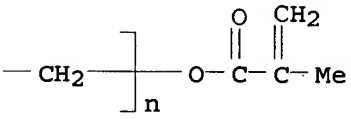
CM 3

CRN 41637-38-1
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A



PAGE 1-B



IC ICM C08F222-20
ICS G02B001-04; C08F220-06
CC 37-6 (Plastics Manufacture and Processing)
IT 86124-28-9P, Ethoxylated bisphenol A dimethacrylate-methacrylic acid copolymer **496045-26-2P** 532984-93-3P, Acrylic acid-Craynor CN 965 copolymer 532984-94-4P, Methacrylic acid-polypropylene glycol dimethacrylate copolymer 532987-59-0P, Ethoxylated bisphenol A dimethacrylate-methacrylic acid-polypropylene glycol dimethacrylate copolymer 532987-61-4P, Ethoxylated bisphenol A dimethacrylate-methacrylic acid-mono(2-methacryloyloxyethyl) phthalate copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical

or engineered material use); PREP (Preparation); USES (Uses) (radical-polymerizable compns. for manufacture of impact-resistant **eyeglass lenses**)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:117881 HCAPLUS
DOCUMENT NUMBER: 138:154354
TITLE: High-refractive-index optical resin compositions
INVENTOR(S): Smith, Robert A.; Okoroafor, Michael O.; Herold, Robert D.; Freeman, T. Edwin
PATENT ASSIGNEE(S): PPG Industries Ohio, Inc., USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011926	A1	20030213	WO 2001-US23394	200107 25
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1412402	A1	20040428	EP 2001-955957	200107 25
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004536934	T2	20041209	JP 2003-517113	200107 25

PRIORITY APPLN. INFO.: WO 2001-US23394 W 200107 25

AB Polymerizable compns. comprise (a) a mixture of thio(meth)acrylate functional monomers comprising a first thio(meth)acrylate functional monomer, e.g., bis(thiomethacrylate)-1,2-ethylene, and a second thio(meth)acrylate functional monomer, which is chain extended; (b) an aromatic monomer having ≥2 vinyl groups, e.g., divinylbenzene; (c) a polythiol monomer having ≥2 thiol groups, e.g., pentaerythritol tetrakis(3-mercaptopropionate); and (d) a comonomer selected from (i) an anhydride monomer having ≥1 unsatd. group, e.g., methacrylic anhydride, (ii) a monomer having ≥3 (meth)acryloyl groups, e.g., pentaerythritol

tetrakis(acrylate), and (iii) mixts. thereof. Polymers of the polymerizable compns. have a refractive index of ≥1.57 and an Abbe number of ≥33.

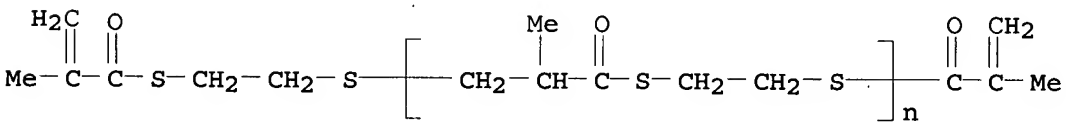
IT **494863-89-7P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(high-refractive-index **optical** thio(meth)acrylate resin compns.)

RN 494863-89-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, anhydride, polymer with 2,2-bis[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl bis(3-mercaptopropanoate), diethenylbenzene, S,S'-1,2-ethanediyl bis(2-methyl-2-propenethioate) and α-(2-methyl-1-oxo-2-propenyl)-ω-[[2-[(2-methyl-1-oxo-2-propenyl)thio]ethyl]thio]poly[thio-1,2-ethanediylthio(2-methyl-1-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

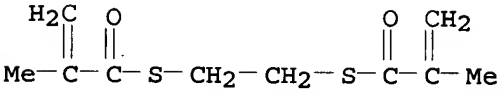
CM 1

CRN 393137-65-0
CMF (C6 H10 O S2)n C10 H14 O2 S2
CCI PMS



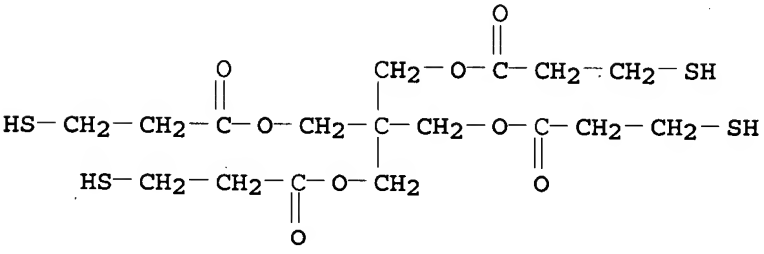
CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2



CM 3

CRN 7575-23-7
CMF C17 H28 O8 S4



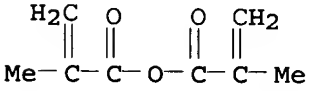
CM 4

CRN 1321-74-0
CMF C10 H10
CCI IDS

2 [D1-CH=CH2]

CM 5

CRN 760-93-0
CMF C8 H10 O3



IC ICM C08F228-02
ICS C08F220-38; C08F212-34; C08F222-10; C08F222-04; G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT **494863-89-7P 496042-19-4P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(high-refractive-index **optical** thio(meth)acrylate resin compns.)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:117880 HCAPLUS
DOCUMENT NUMBER: 138:154353
TITLE: High-refractive-index optical resin compositions
INVENTOR(S): Herold, Robert D.; Okoroafor, Michael O.; Smith, Robert A.; Graham, Marvin J.
PATENT ASSIGNEE(S): PPG Industries Ohio, Inc., USA
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2003011925 A1 20030213 WO 2001-US23396
200107
25
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1409562 A1 20040421 EP 2001-955959
200107
25
EP 1409562 B1 20060412
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2004536933 T2 20041209 JP 2003-517112
200107
25
PRIORITY APPLN. INFO.: WO 2001-US23396 W
200107
25

AB Polymerizable compns. comprise (a) a mixture of thio(meth)acrylate functional monomers comprising a first thio(meth)acrylate functional monomer, e.g., bis(thiomethacrylate)-1,2-ethylene, and a second thio(meth)acrylate functional monomer, which is chain extended; and (b) a radically polymerizable comonomer having ≥2 (meth)acryloyl groups selected from, for example, (i) ethoxylated bisphenol A dimethacrylate, (ii) polyethylene glycol dimethacrylate, (iii) trimethylolpropane trimethacrylate, and (iv) mixts. thereof. Polymers of the polymerizable compns. have a refractive index of ≥1.57 and an Abbe number of ≥33.

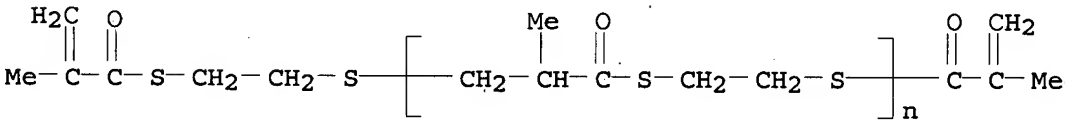
IT **496045-26-2P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(high-refractive-index **optical** thio(meth)acrylate resin compns.)

RN 496045-26-2 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and α-(2-methyl-1-oxo-2-propenyl)-ω-[[2-[(2-methyl-1-oxo-2-propenyl)thio]ethyl]thio]poly[thio-1,2-ethanediylthio(2-methyl-1-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

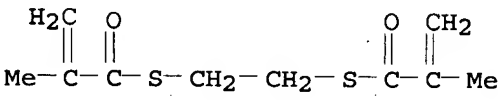
CM 1

CRN 393137-65-0
CMF (C6 H10 O S2)n C10 H14 O2 S2
CCI PMS



CM 2

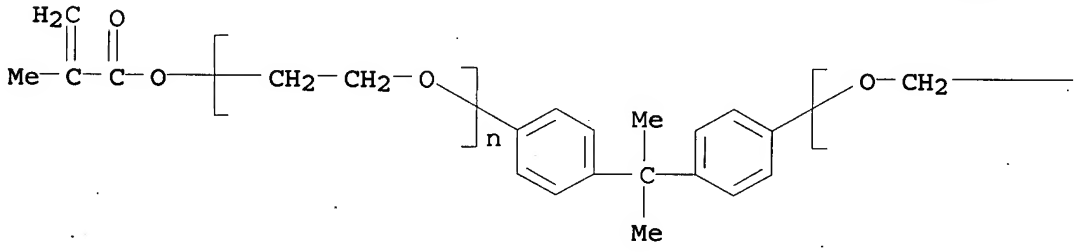
CRN 117675-95-3
CMF C10 H14 O2 S2



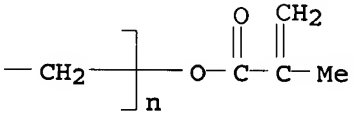
CM 3

CRN 41637-38-1
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A



PAGE 1-B



IC ICM C08F220-38
ICS C08L033-14; G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT **496045-26-2P 496045-28-4P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(high-refractive-index **optical** thio(meth)acrylate resin compns.)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:84610 HCAPLUS
DOCUMENT NUMBER: 136:135176
TITLE: High refractive index optical resin composition
INVENTOR(S): Smith, Robert A.; Okoroafor, Michael O.; Herold, Robert D.; Freeman, T. Edwin
PATENT ASSIGNEE(S): PPG Industries Ohio, Inc., USA
SOURCE: U.S., 14 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6342571	B1	20020129	US 1999-377805	19990820

PRIORITY APPLN. INFO.: US 1999-377805 19990820

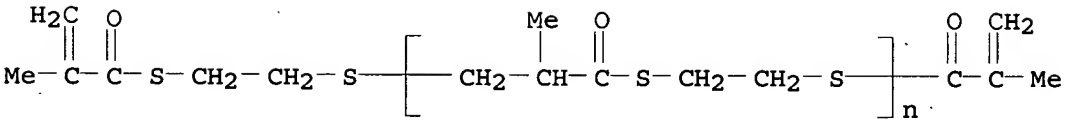
AB Polymerizable compns. comprise: (a) a mixture of thio(meth)acrylate functional monomers comprising, (a)(i) a first thio(meth)acrylate functional monomer, e.g., bis(thiomethacrylate)-1,2-ethylene, and (a)(ii) a second thio(meth)acrylate functional monomer, which is chain extended; (b) an aromatic monomer having at least two vinyl groups, e.g., divinyl benzene; (c) a polythiol monomer having at least two thiol groups, e.g., pentaerythritol tetrakis(3-mercaptopropionate); and (d) a comonomer selected from, (d)(i) an anhydride monomer having at least one ethylenically unsatd. group, e.g., methacrylic anhydride; (d) (ii) a monomer having at least three (meth)acryloyl groups, e.g., pentaerythritol tetrakis(acrylate); and (d)(iii) mixts. of monomers (d)(i) and (d)(ii). A polymer of the polymerizable composition has a refractive index of at least 1.57 and an Abbe number of at least 33.

IT **393137-66-1P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(high refractive index **optical** resin composition)

RN 393137-66-1 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[[2-[(2-methyl-1-oxo-2-propenyl)thio]ethyl]thio]poly[thio-1,2-ethanediylthio(2-methyl-1-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

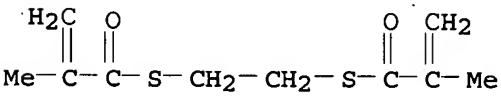
CM 1

CRN 393137-65-0
CMF (C6 H10 O S2)n C10 H14 O2 S2
CCI PMS



CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2



IC ICM C08F220-20
ICS C08F220-28; C08F220-38
INCL 526286000
CC 35-4 (Chemistry of Synthetic High Polymers)
IT **393137-66-1P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(high refractive index **optical** resin composition)
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:265481 HCAPLUS
DOCUMENT NUMBER: 134:281571
TITLE: Polymerizable compositions for making transparent polymer substrates, resulting polymer substrates and their uses in optics
INVENTOR(S): Primel, Odile; Pillie, Maxime; Richard, Gilles; Yean, Leanirith
PATENT ASSIGNEE(S): Essilor International Compagnie Generale d'Optique, Fr.
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001025302	A1	20010412	WO 2000-FR2771	20001005

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,

TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

FR 2799470	A1	20010413	FR 1999-12459	19991006
FR 2799470	B1	20020111		
EP 1137681	A1	20011004	EP 2000-967957	20001005
EP 1137681	B1	20050112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003511494	T2	20030325	JP 2001-528465	20001005
AT 286924	E	20050115	AT 2000-967957	20001005
US 2002115819	A1	20020822	US 2001-876280	20010606
US 6518393	B2	20030211		
PRIORITY APPLN. INFO.:			FR 1999-12459 A	19991006
			WO 2000-FR2771 W	20001005

AB The invention concerns thermal or photochem. polymerizable compns. comprising: (a) at least 40 parts by weight, preferably at least 50 parts by weight of ≥1 thio(meth)acrylate monomer; (b) ≥1 monomer that forms a homopolymer with high Abbe coefficient (e.g., dicyclopentadiene dimethacrylate); (c) not more than 20 parts by weight, preferably not more than 15 parts by weight, and advantageously not more than 10 parts by weight of an aromatic polyvinyl monomer (e.g., divinylbenzene); and (d) ≥1 polythiol [e.g., pentaerythritol tetrakis(thioglycolate)]; for 100 parts by weight of (a), (b), (c), and (d). The invention is useful for making optical lenses with high impact strength.

IT **333722-26-2P**
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(polymerizable compns. containing thio(meth)acrylates, monomers forming homopolymers with high Abbe nos., and polythiols for making impact-resistant **transparent** polymers for optics)

RN 333722-26-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with 2,2-bis[[(mercaptoacetyl)oxy]methyl]-1,3-propanediyl bis(mercaptoacetate), diethenylbenzene, S,S'-1,2-ethanediyl bis(2-methyl-2-propenethioate), S-(2-mercaptoethyl) 2-methyl-2-propenethioate and S,S'-[(2-methyl-1-oxo-1,3-propanediyl)bis(thio-2,1-ethanediyl)] bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 333722-25-1
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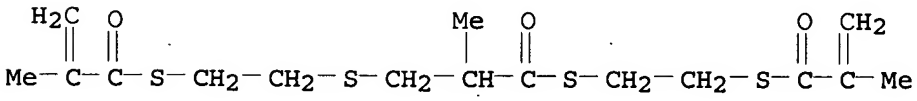
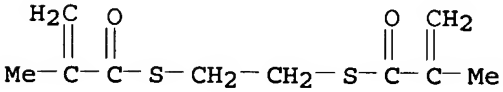


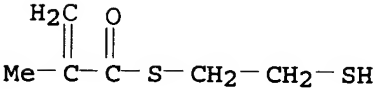
CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2



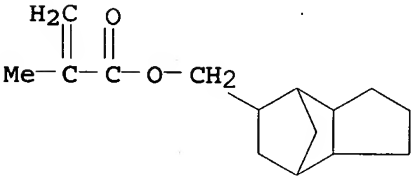
CM 3

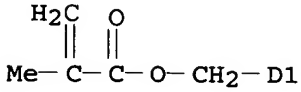
CRN 52135-51-0
CMF C6 H10 O S2



CM 4

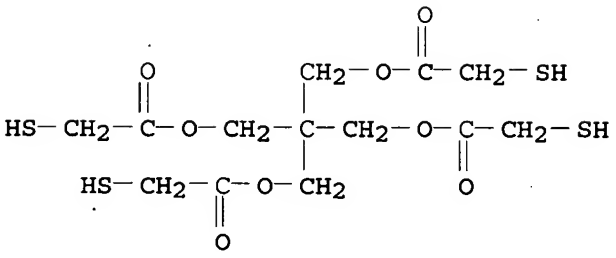
CRN 43048-08-4
CMF C20 H28 O4
CCI IDS





CM 5

CRN 10193-99-4
CMF C13 H20 O8 S4



CM 6

CRN 1321-74-0
CMF C10 H10
CCI IDS

2 [D1-CH=CH2]

IC ICM C08F228-02
ICS G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
IT **333722-26-2P 333722-27-3P** 333778-34-0P
333778-36-2P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(polymerizable compns. containing thio(meth)acrylates, monomers forming homopolymers with high Abbe nos., and polythiols for making impact-resistant **transparent** polymers for optics)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:751459 HCAPLUS
DOCUMENT NUMBER: 131:352098
TITLE: Polymerizable thiol-containing prepolymer blends, optical resins, and manufacture of th optical resins
INVENTOR(S): Amagai, Akikazu; Wataru, Isao
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 42 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11322864	A2	19991126	JP 1998-127800	19980511

PRIORITY APPLN. INFO.: JP 1998-127800 19980511

AB The blends, having viscosity at 25° 20-10,000 cps and showing polymerization shrinkage in molding ≤12%, comprise polymerizable SH-containing prepolymers and compns. and contain ≥12% S. The prepolymers are those having viscosity at 25° 20-50,000 cps and being prepared by reaction of 100% polymerizable SH-containing prepolymers, p% compds. involving ≥2 units X1C(O)CR1:CR2R3 (I; R1-R3 = H, C1-5 alkyl; X1 = O, S), q% compds. with ≥1.3 SH, and r% polymerizable compds. at SH reaction ratio 3-90%. The compns. consist of the 100% SH-containing prepolymers, (x - p)% compds. involving ≥2 I, (y - q)% compds. with ≥1.3 SH, and (z - r)% polymerizable compds. (5< x ≤70; 15≤ y ≤60; 15≤ z <35; x + y + z = 100; 0< p ≤x; 0< q ≤y; 0≤ r ≤z). The optical resins are those prepared from the above blends by polymerization of the SH-containing prepolymers. The storage-stable prepolymer blends provide optical resins with improved color tone, high n, and high Abbe number Thus, pentaerythritol tetraacrylate 400, bis(2-mercaptoethyl) sulfide 320, and divinylbenzene (II) 100 g were polymerized at 40° in air for 4 h to give SH-containing prepolymer, which was mixed with 180 g II at 25° in vacuo for 2 h to give a composition showing retention of initial viscosity for 6 mo in a sealed bottle at 5°. Then, 100 g of the composition was mixed with 0.2 g 2,4,6-trimethylbenzoyldiphenylphosphine oxide and UV-cured in a mold to give test pieces showing nD 1.601, Abbe number νD 40, initial yellowing index (YI) 0.85, and YI after 6-mo storage 0.88.

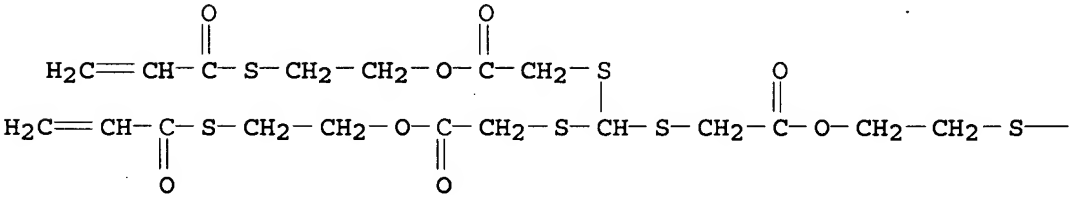
IT **250691-54-4P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thiol-containing prepolymer compns. with storage stability and reduced polymerization shrinkage for **optical** materials)

RN 250691-54-4 HCAPLUS
CN 8-Oxa-3,5,11-trithiatetradec-13-enoic acid, 7,12-dioxo-4-[[2-oxo-2-[2-[(1-oxo-2-propenyl)thio]ethoxy]ethyl]thio]-, 2-[(1-oxo-2-propenyl)thio]ethyl ester, polymer with diethenylbenzene, 2,2'-[1,2-ethanediylbis(thio)]bis[acetic acid] and 2-[(2-mercaptoethyl)thio]-1,3-propanedithiol (9CI) (CA INDEX NAME)

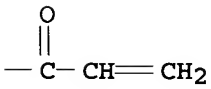
CM 1

CRN 190522-13-5
CMF C22 H28 O9 S6

PAGE 1-A

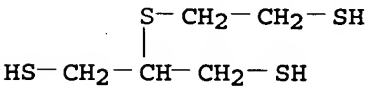


PAGE 1-B



CM 2

CRN 149334-77-0
CMF C5 H12 S4



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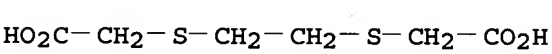
CRN 7244-02-2
CMF C6 H10 O4 S2



CM 4

CRN 1321-74-0
CMF C10 H10
CCI IDS

2 [D1— CH═ CH_2]

IC ICM C08F290-00
ICS C08F299-00; G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 250691-49-7P, Bis(2-mercaptoethyl) sulfide-divinylbenzene-pentaerythritol tetraacrylate copolymer 250691-50-0P, Bis(2-mercaptoethyl) sulfide-divinylbenzene-trimethylolpropane triacrylate copolymer 250691-51-1P, Bis(2-mercaptoethyl) sulfide-divinylbenzene-pentaerythritol triacrylate copolymer 250691-52-2P, Bis(2-mercaptoethyl) sulfide-dipentaerythritol hexaacrylate-divinylbenzene copolymer 250691-53-3P, Dipentaerythritol hexaacrylate-dithiol-divinylbenzene copolymer **250691-54-4P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thiol-containing prepolymer compns. with storage stability and reduced polymerization shrinkage for **optical** materials)

L52 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:568812 HCAPLUS
DOCUMENT NUMBER: 127:234733
TITLE: Manufacture of thio(meth)acrylates and plastic lenses from them
INVENTOR(S): Iguchi, Yuichiro; Oka, Koichiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09221467	A2	19970826	JP 1996-27079	199602 14

PRIORITY APPLN. INFO.: JP 1996-27079 199602 14

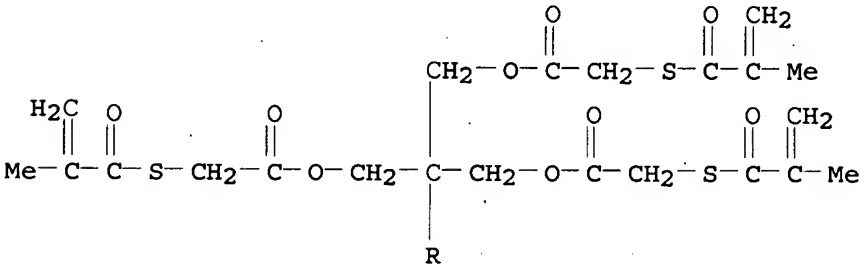
OTHER SOURCE(S): MARPAT 127:234733
AB In manufacture of thio(meth)acrylates, useful as monomers for plastic lenses, from (meth)acrylic acid chloride and SH-containing compds., H2O is added to the reaction system before or during the reaction. Thus, methacrylic acid chloride (prepared from methacrylic acid and

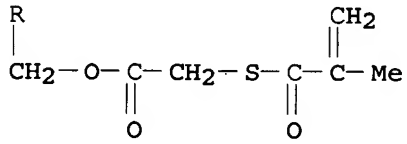
PCl3) was mixed with H2O and treated with p-HSCH2CH2SCH2C6H4CH2SCH2CH2SH in PhMe in the presence of NEt3 at 5° for 10 h to give 1,4-bis(2-mercaptoethylenethiomethylene)benzene dimethacrylate, which was polymerized with styrene at 85:15 in a mold at 50-120° for 20 h to give a plastic lens without sink caused by spontaneous mold release.

IT **195304-31-5P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of thio(meth)acrylates for plastic **lenses**)

RN 195304-31-5 HCAPLUS

CN Acetic acid, [(2-methyl-1-oxo-2-propenyl)thio]-, 2,2-bis[[[[(2-methyl-1-oxo-2-propenyl)thio]acetyl]oxy]methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)





IC ICM C07C327-22
ICS B29D011-00; C08F020-38; B29K033-04

CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 25, 38

IT 117651-91-9P 129283-82-5P 131273-09-1P **195304-31-5P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of thio(meth)acrylates for plastic **lenses**)

IT 155500-38-2P 195304-32-6P 195304-33-7P **195304-34-8P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of thio(meth)acrylates for plastic **lenses**)

L52 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:453268 HCAPLUS
DOCUMENT NUMBER: 127:96339
TITLE: Sulfur-containing (meth)acrylates for manufacture of scratch-resistant plastic lenses with high refractive index
INVENTOR(S): Kobayashi, Seiichi; Kawauchi, Keiya; Suzuki, Yoriyuki; Imai, Masao; Fujii, Kenichi
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09143153	A2	19970603	JP 1995-302729	199511 21
JP 3439583	B2	20030825		
PRIORITY APPLN. INFO.:			JP 1995-302729	199511 21

OTHER SOURCE(S): MARPAT 127:96339

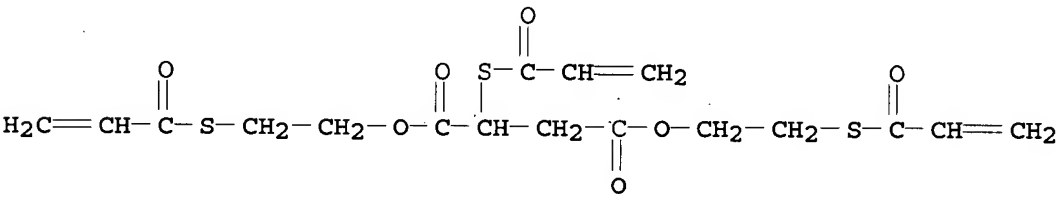
AB Compds. X[CO2(CH2)nSCOCR:CH2]m [R = H, Me; X = H2C:CRCOS(CH2)r, CH(SCOCR:CH2)CH2, CH(SCOCR:CH2)CH(SCOCR:CH2); m = 1, 2; n, r = 1-3] are prepared and polymerized Thus, polymerizing acryloylthioethyl acryloylthioacetate in the presence of tert-Bu peroxy-2-ethylhexanoate and 2-hydroxy-2-methyl-1-phenylpropane-1-one in a mold gave a transparent lens with refractive index 1.591, Abbe number 38.6, and good scratch resistance.

IT **192130-51-1P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(sulfur-containing (meth)acrylate polymers for scratch-resistant **lenses**)

RN 192130-51-1 HCAPLUS
CN Butanedioic acid, [(1-oxo-2-propenyl)thio]-, bis[2-[(1-oxo-2-propenyl)thio]ethyl] ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 192130-48-6
CMF C17 H20 O7 S3



IC ICM C07C327-28
ICS C08F020-38; C08F220-38; G02B001-04; G02C007-02

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 23, 35, 73

IT 192130-50-0P **192130-51-1P** **192130-52-2P**
192130-53-3P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(sulfur-containing (meth)acrylate polymers for scratch-resistant **lenses**)

IT 38705-47-4P, 2-Mercaptoethyl thioglycolate 123097-82-5P
123173-76-2P 192130-47-5P **192130-48-6P**
192130-49-7P

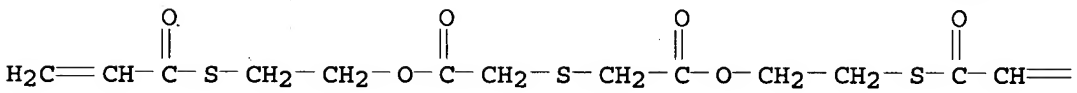
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(sulfur-containing (meth)acrylate polymers for scratch-resistant **lenses**)

L52 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:402455 HCAPLUS
DOCUMENT NUMBER: 127:34620
TITLE: Sulfur-containing (meth)acrylates, plastic lens compositions, and sulfur-containing polymers
INVENTOR(S): Kobayashi, Seiichi; Kawauchi, Keiya; Suzuki, Yoriyuki; Imai, Masao; Fujii, Kenichi
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09124592	A2	19970513	JP 1995-288301	19951107
JP 3439582	B2	20030825		
PRIORITY APPLN. INFO.:			JP 1995-288301	19951107

OTHER SOURCE(S): MARPAT 127:34620
AB Title compds. with high n. and excellent dyeability have formula X[CO2(CH2)nSC(O)CR:CH2]m [I; R = H, Me; X = (CH2)pS(CH2)p, (CH2)pSS(CH2)p, (CH2)pS(CH2)qS(CH2)p, (CH2)pSCH[S(CH2)p]2; m = 2, 3; n, p, q = 1-3]. Plastic lens compns. containing I and I polymers are also claimed. Thus, 27.0 g bis(2-mercaptoethyl) thiodiglycolate (obtained from thiodiglycolic acid and 2-mercaptoethanol) and 26.7 g β-chloropropionyl chloride were reacted at 50° to give bis(acryloylthioethyl) thiodiglycolate, 50 g of which was mixed with 50 mg tert-Bu peroxy-2-ethylhexanoate and 50 mg 2-hydroxy-2-methyl-1-phenyl-1-propanone. The mixture was irradiated with UV and polymerized at 120° to give a transparent and colorless lens with n. 1.587, Abbe number 39.8, and excellent dyeability.
IT **190522-07-7P**
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(S-containing (meth)acrylates and their polymers for plastic **lenses** having high n. and excellent dyeability)
RN 190522-07-7 HCAPLUS
CN Acetic acid, 2,2'-thiobis-, bis[2-[(1-oxo-2-propenyl)thio]ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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IC ICM C07C327-28
ICS C08F020-38; C08F220-38; G02B001-04
CC 35-2 (Chemistry of Synthetic High Polymers)
IT **190522-07-7P 190522-09-9P 190522-11-3P**
190522-13-5P
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(S-containing (meth)acrylates and their polymers for plastic **lenses** having high n. and excellent dyeability)
IT **190522-08-8P 190522-10-2P 190522-12-4P**
190522-14-6P 190522-15-7P 190522-16-8P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(S-containing (meth)acrylates and their polymers for plastic **lenses** having high n. and excellent dyeability)

L52 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:496986 HCAPLUS
DOCUMENT NUMBER: 119:96986
TITLE: Colorless and transparent organic glasses for optical lenses
INVENTOR(S): Nago, Hironobu; Kazama, Hideki; Matsuoka, Shingo
PATENT ASSIGNEE(S): Tokuyama Soda Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05051412	A2	19930302	JP 1991-217407	19910828

PRIORITY APPLN. INFO.: JP 1991-217407 19910828

AB Glasses with high refractive index are manufactured by bulk polymerization of monomers having disulfide bonds and radically polymerizable double bonds. Thus, a mixture of 100 parts bis(2-methacryloylthioethyl)

disulfide and 2 parts tert-Bu peroxy-2-ethylhexanoate was inserted in a gasket and heated at 30-90° for 20 h to give a lens with refractive index 1.638, Abbe number 33, Rockwell L hardness 110, sp. gr. 1.34, good silicone coatability, and no bad odor.

IT **149360-21-4P**
RL: PREP (Preparation)
(preparation of **transparent**, with good hardness and high refractive index, for **optical lenses**)

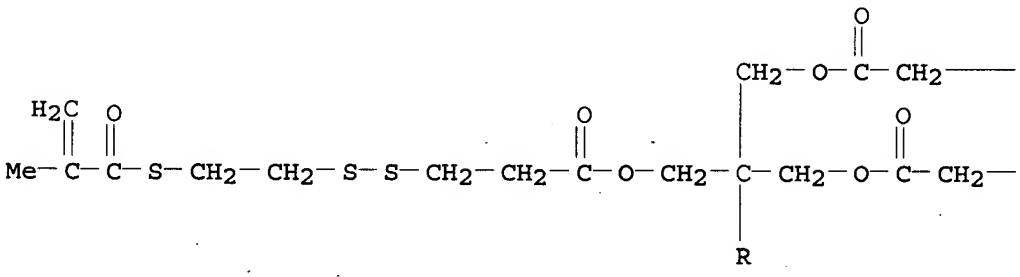
RN 149360-21-4 HCAPLUS

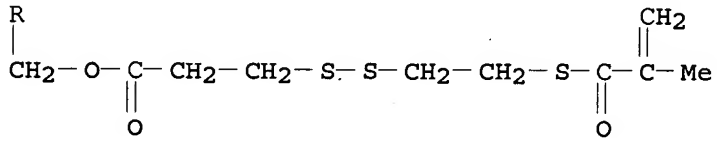
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with 2,2-bis[[3-[[2-[(2-methyl-1-oxo-2-propenyl)thio]ethyl]dithio]-1-oxopropoxy]methyl]-1,3-propanediyl bis[3-[[2-[(2-methyl-1-oxo-2-propenyl)thio]ethyl]dithio]propanoate] (9CI) (CA INDEX NAME)

CM 1

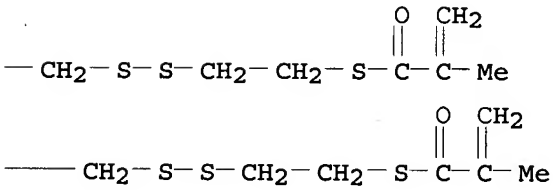
CRN 149360-20-3
CMF C41 H60 O12 S12

PAGE 1-A





PAGE 1-B



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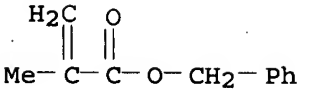
CMF C11 H12 O2



IC ICM C08F020-38
ICS C08F012-06; C08F220-30; G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 36787-54-9P 149359-89-7P 149359-91-1P 149359-93-3P
149359-95-5P 149359-97-7P 149359-99-9P 149360-01-0P
149360-03-2P 149360-05-4P 149360-07-6P 149360-09-8P
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149385-01-3P
RL: PREP (Preparation)
(preparation of **transparent**, with good hardness and high refractive index, for **optical lenses**)

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L55 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:322386 HCAPLUS
DOCUMENT NUMBER: 142:392847
TITLE: **Mixtures** for the production of transparent plastics for optical lenses, transparent plastics as well as procedures for their production and use.
INVENTOR(S): Schmitt, Bardo; Hartmann, Patrik
PATENT ASSIGNEE(S): Roehm GmbH & Co. KG, Germany
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10342521	A1	20050414	DE 2003-10342521	200309 12
CA 2513147	AA	20050414	CA 2004-2513147	200407 10 <--
WO 2005033157	A1	20050414	WO 2004-EP7623	200407 10 <--

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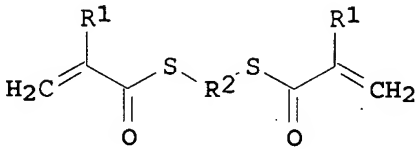
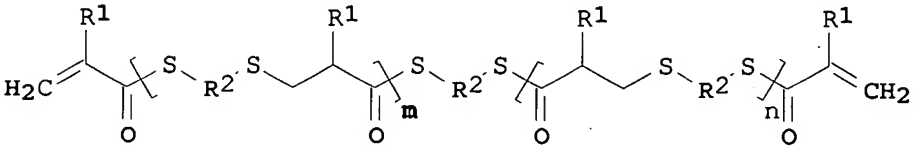


I



II

AB A title mixture useful for optical lenses manufacture comprises dithiol diacrylates I and II (R1 = H or Me, R2 = linear or branched, aliphatic or cycloaliph. groups, or substituted or unsubstituted aromatic or heteroarom. groups, m + n >0) and a radical polymerizable monomer (A) having mol. weight ≥150 and ≥2 olefinic groups [such as allyl or/and (meth)acryloyl-groups] per mol.

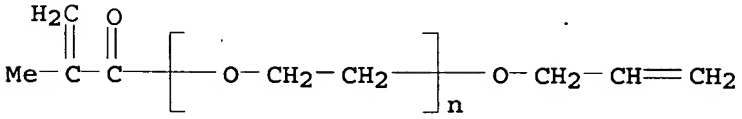
IT **849671-67-6P**, 1,2-Ethanedithiol dimethacrylate-Polyethylene glycol allyl ether methacrylate-styrene copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(mixts. for production of **transparent** plastics)

RN 849671-67-6 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-(2-propenyloxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

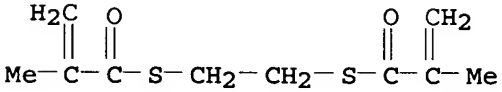
CM 1

CRN 121826-50-4
CMF (C2 H4 O)n C7 H10 O2
CCI PMS



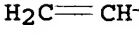
CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2



CM 3

CRN 100-42-5
CMF C8 H8



IC ICM C08F020-38

CC 35-4 (Chemistry of Synthetic High Polymers)

IT **849671-67-6P**, 1,2-Ethanedithiol dimethacrylate-Polyethylene glycol allyl ether methacrylate-styrene copolymer
849671-68-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(mixts. for production of **transparent** plastics)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:160856 HCAPLUS
DOCUMENT NUMBER: 142:241788
TITLE: Photocurable adhesive **composition** and its use in the optical field
INVENTOR(S): Weber, Steven; Jiang, Peiqi; Turshani, Yassin; Jallouli, Aref
PATENT ASSIGNEE(S): Essilor International Compagnie Generale d'Optique, Fr.
SOURCE: U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 417,525, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

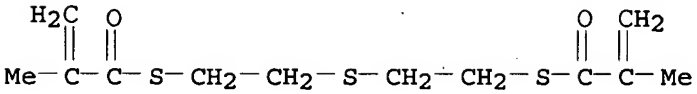
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005043430	A1	20050224	US 2004-862693	200406 07
CN 1806186	A	20060719	CN 2004-80016798 <--	200404 15
PRIORITY APPLN. INFO.:			US 2003-417525 B2 <--	200304 17

AB The invention concerns a photocurable adhesive composition comprising, based on total weight of photopolymerizable monomers and/or oligomers of the composition: 5 to 60% of at least one mono or polyacrylate monomer or oligomer thereof (A); 5 to 50% of at least one thio(meth)acrylate monomer or oligomer thereof (B); and 20 to 50% of at least one aromatic dimethacrylate monomer or oligomer thereof (C); with the proviso that the composition does not contain a brominated monofuntional acrylate.
IT **784208-48-6P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable adhesive composition and its use in the **optical** field)
RN 784208-48-6 HCAPLUS
CN 2-Propenoic acid, oxydi-2,1-ethanediyl ester, polymer with α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and S,S'-(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9

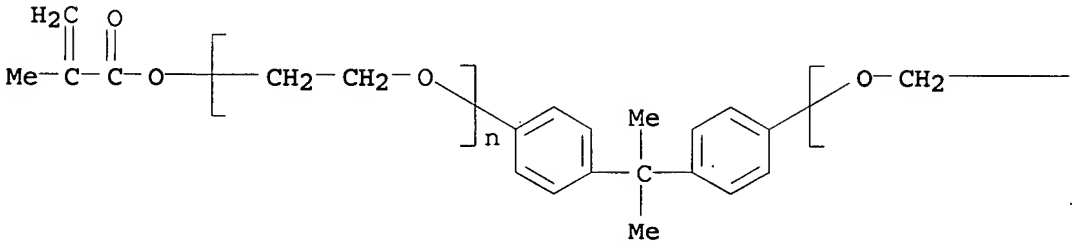
CMF C12 H18 O2 S3



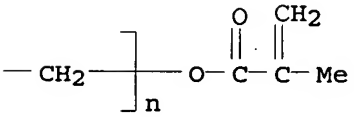
CM 2

CRN 41637-38-1
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A

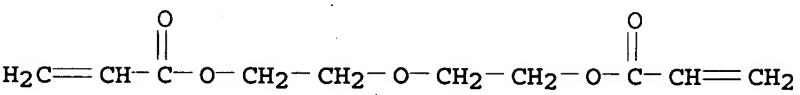


PAGE 1-B



CM 3

CRN 4074-88-8
CMF C10 H14 O5



IC ICM C08F012-30
ICS C08J003-28
INCL 522114000; X52-631.9; X52-628.6; X52-211.7; X52-211.8
CC 38-3 (Plastics Fabrication and Uses)
IT **784208-48-6P 845647-86-1P 845647-87-2P**
845647-88-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable adhesive composition and its use in the **optical** field)

L55 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:986206 HCAPLUS
DOCUMENT NUMBER: 141:429448
TITLE: Radiation-curable **composition** of sulfur-containing polyurethane (meth)acrylate for optical instrument
INVENTOR(S): Ofusa, Kazuki
PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004323643	A2	20041118	JP 2003-119066	200304 23
			<--	
PRIORITY APPLN. INFO.:			JP 2003-119066	200304 23
			<--	

OTHER SOURCE(S): MARPAT 141:429448

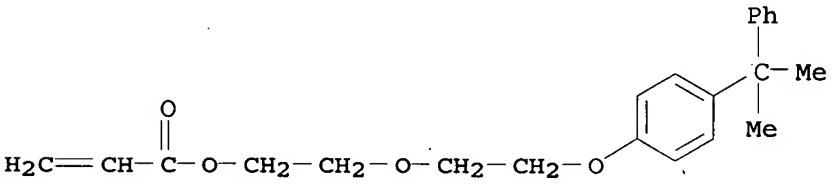
AB The composition contains a compound obtained by reaction of HZ(CH2CH2S)nCH2CH2ZH (Z = O, S; n = 1-4) and a diol with an organic polyisocyanate and an OH-containing (meth)acrylate. The composition is cured to give an optical instrument, preferably a lens, with high n, flexibility, and adhesion to a substrate.

IT **794588-41-3P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-curable sulfur-containing polyurethane (meth)acrylate composition for **optical** instrument)

RN 794588-41-3 HCAPLUS
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1,3-diisocyanatomethylbenzene, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), 2-[2-[4-(1-methyl-1-phenylethyl)phenoxy]ethoxy]ethyl 2-propenoate, 2-phenoxyethyl 2-propenoate, 2,2'-thiobis[ethanethiol] and S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

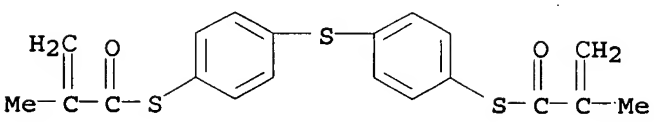
CM 1

CRN 192462-21-8
CMF C22 H26 O4



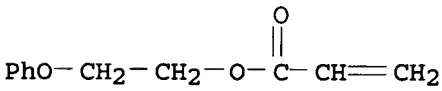
CM 2

CRN 129283-82-5
CMF C20 H18 O2 S3



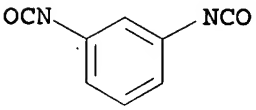
CM 3

CRN 48145-04-6
CMF C11 H12 O3



CM 4

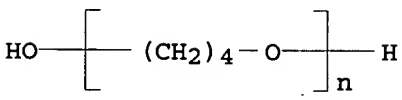
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

CM 5

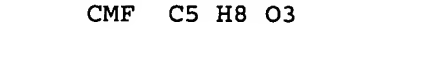
CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 6

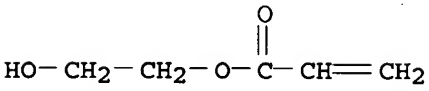
CRN 3570-55-6

CMF C4 H10 S3



CM 7

CRN 818-61-1
CMF C5 H8 O3



IC ICM C08F290-06
ICS G02B001-04
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
IT 794588-28-6P 794588-33-3P 794588-36-6P 794588-38-8P
794588-41-3P 794588-43-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-curable sulfur-containing polyurethane (meth)acrylate composition for **optical** instrument)

L55 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:507896 HCAPLUS
DOCUMENT NUMBER: 141:55405
TITLE: Photocurable resin **compositions** showing high hardness and refractive indexes, and good transparency after curing
INVENTOR(S): Maruo, Junichi; Yamamoto, Katsumasa; Suzuki, Michio
PATENT ASSIGNEE(S): Sumitomo Seika Chemicals Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004176006	A2	20040624	JP 2002-346677	200211 29
			<--	
PRIORITY APPLN. INFO.:			JP 2002-346677	200211 29
			<--	

OTHER SOURCE(S): MARPAT 141:55405
AB The compns., useful for optical materials, contain 4,4'-R1SC6H4-mXmSC6H4-mXmSR1 [I; R1 = (meth)acryloyl, vinyl; X =

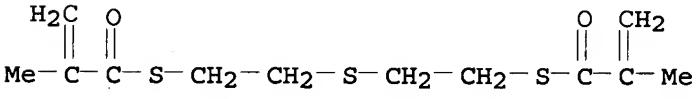
C1-4 alkyl, halo; m = 0-4] and/or CH2:CR2COS(CH2CH2Y)nCH2CH2SCOCR2:CH2(II; R2 = H, Me; Y = S, O; n = 0-5), and mixed metal oxides. Thus, a composition containing I (R1 = methacryloyl, m = 0; manufactured from 4,4'-thiobisbenzenethiol and methacryloyl chloride), S 2EG (II; R2 = Me, Y = S, n = 1), and Suncolloid HIT 301M1 (Sb Sn Ti Zr oxide) was applied on a PET film, dried, and cured by UV irradiation to give a 5-μm thick film showing haze 1.8% and pencil hardness 2H.

IT **127668-31-9P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable S-containing (meth)acryloyl and/or vinyl polymer compns. containing mixed metal oxides for **optical** materials)

RN 127668-31-9 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-2,1-ethanediyl) ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9
CMF C12 H18 O2 S3



IC ICM C08F002-44
ICS C08F002-46; G02B001-04

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 23, 25, 73

IT **127668-31-9P** 181464-15-3P **599164-39-3P** **599164-40-6P** **600165-49-9P** **706363-59-9P** **706363-74-8P** **706363-79-3P** **706363-85-1P** **706758-65-8P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable S-containing (meth)acryloyl and/or vinyl polymer compns. containing mixed metal oxides for **optical** materials)

IT 60147-09-3P **117675-95-3P** **118314-50-4P** **119380-51-7P** **129283-82-5P** 133921-80-9P **137052-23-4P** 152419-78-8P 152419-82-4P **599164-37-1P** **706362-81-4P** 706363-16-8P 706363-22-6P 706363-27-1P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(photocurable S-containing (meth)acryloyl and/or vinyl polymer compns. containing mixed metal oxides for **optical** materials)

L55 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:416836 HCAPLUS
DOCUMENT NUMBER: 135:20392
TITLE: Method for polymerizing and/or curing of a monomer **composition** and use for making lenses

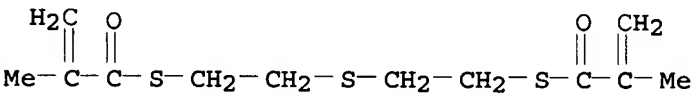
INVENTOR(S): Jiang, Peiqi; Menduni, Gilbert
PATENT ASSIGNEE(S): Essilor International Compagnie Generale D'optique, Fr.
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001039962	A1	20010607	WO 2000-FR3354	200011 30
			<--	
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
FR 2801889	A1	20010608	FR 1999-15244	199912 03
			<--	
PRIORITY APPLN. INFO.:			FR 1999-15244 A	199912 03
			<--	

AB The invention concerns a method which consists in providing a composition of polymerizable monomers in the cavity of a mold with two parts assembled by an adhesive tape, in carrying out a first step which consists in prepolymg. the composition until a self-supporting gel is obtained without allowing the adhesive tape to lose its adhesive properties, and a step which consists in postpolymg. the gel by applying a UV radiation or by heat treatment for simultaneously causing the tape to lose its adhesive properties depending on whether the adhesive tape loses its adhesive properties under the action of UV radiation or under the action of the heat. The invention is useful for making ophthalmic lenses. This process allows improved removal of the adhesive tape after polymerization and/or curing.

IT **117651-91-9DP**, Bis(2-methacryloylthioethyl) sulfide, polymers with dicyclopentadiene dimethacrylate and urethane acrylate
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polymerizing and/or curing of monomer compns. for making **lenses**)

RN 117651-91-9 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)



IC ICM B29D011-00
ICS B29C033-20; C08F002-00; C08F002-46
CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 63

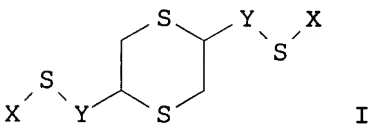
IT 77-73-6DP, Dicyclopentadiene, methacrylate derivs., polymers with bis(methacryloylthioethyl) sulfide and urethane acrylate 79-10-7DP, Acrylic acid, urethane derivs., polymers with dicyclopentadiene dimethacrylate and bis(methacryloylthioethyl) sulfide 79-41-4DP, Methacrylic acid, dicyclopentadiene derivs., polymers with bis(methacryloylthioethyl) sulfide and urethane acrylate **117651-91-9DP**, Bis(2-methacryloylthioethyl) sulfide, polymers with dicyclopentadiene dimethacrylate and urethane acrylate
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polymerizing and/or curing of monomer compns. for making **lenses**)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:356420 HCAPLUS
DOCUMENT NUMBER: 133:5588
TITLE: Adhesive **compositions** giving high refractive index and transparency after curing useful for optical materials
INVENTOR(S): Okuyama, Yukio; Azuma, Kensaku
PATENT ASSIGNEE(S): Tomoegawa Paper Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000144089	A2	20000526	JP 1998-322706	199811 12
			<--	
PRIORITY APPLN. INFO.:			JP 1998-322706	199811 12
			<--	

OTHER SOURCE(S): MARPAT 133:5588
GI



I

AB Title compns. comprise (A) polythiol compds. I and (B) compds. having ≥2 epoxy groups per mol., where X = (CH2CH2)nH, Y = (CH2)m, m = integer of 1-5, and n = integer of 0-2. Thus, an

adhesive composition comprising I (X = H, Y = CH2) 100, Epikote 806 150, and Curezol 2E4MZ-CN 1 parts was cured at 100° for 2 h giving refractive index 1.60, optical transmittance at 550 nm 97, and adhesive strength >350 kg/cm2.

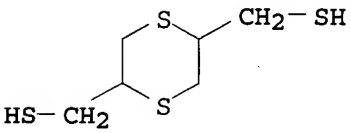
IT **270588-00-6P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(adhesive compns. giving high refractive index and transparency after curing useful for **optical** materials)

RN 270588-00-6 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-4,1-phenylene) ester, polymer with 1,4-dithiane-2,5-dimethanethiol and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

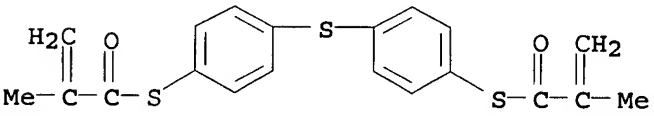
CM 1

CRN 136122-15-1
CMF C6 H12 S4



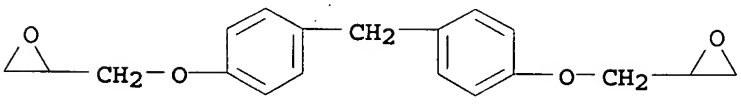
CM 2

CRN 129283-82-5
CMF C20 H18 O2 S3



CM 3

CRN 2095-03-6
CMF C19 H20 O4



IC ICM C09J163-00
ICS C09J011-00

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73

IT 172212-20-3P 270587-85-4P 270587-88-7P 270587-92-3P
270587-94-5P 270587-96-7P 270587-98-9P **270588-00-6P**

270588-02-8P 270588-04-0P 270588-05-1P
270588-06-2P 270588-07-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(adhesive compns. giving high refractive index and transparency after curing useful for **optical** materials)

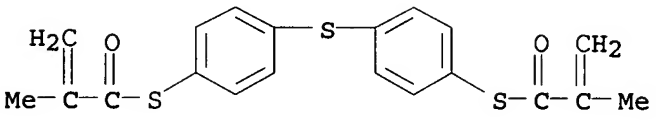
L55 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:802865 HCAPLUS
DOCUMENT NUMBER: 132:50658
TITLE: Curable resin **compositions** containing s-triazinetrithiol compounds and optical materials made from them
INVENTOR(S): Ikeda, Katsunari; Yamamoto, Katsumasa; Wakimura, Kenichi; Suzuki, Michio; Hata, Hiroyuki
PATENT ASSIGNEE(S): Sumitomo Seika K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11349658	A2	19991221	JP 1998-163352	199806 11 <--
PRIORITY APPLN. INFO.:			JP 1998-163352	199806 11 <--

OTHER SOURCE(S): MARPAT 132:50658
AB The compds. giving cured products with high refractive index (n) and Abbe number, useful for eyeglass lens, Fresnel lens, optical disk, etc. (no data), comprise 5-90% (optionally S-thioethylated) 1,3,5-triazine-2,4,6-trithiol compound (A) and 10-95% compds. which can polymerized with the A. Thus, adding a 20% NaOH aqueous solution 600 to a mixture of cyanuryl chloride 184.4, bis(2-mercaptoethyl) sulfide 3240.3 and tetrabutylammonium bromide 1.9 g at 0-10° over 2 h, mixing at room temperature for 2 h and working up gave 2,4,6-tri(5-mercapto-3-thiapentathio)-1,3,5-triazine (A), 10 g of which was combined with 10 g 96% divinylbenzene and 0.8 g AIBN, held in a glass mold at 55° for 6 h, heated to 100° over 5 h and at 100° for 3 h gave a colorless molding with n 1.654, Abbe no 32 and sp. gr. 1.28.
IT **252669-77-5P**
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(curable resin compns. containing s-triazinetrithiol compds. and **optical** materials made from them)
RN 252669-77-5 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-4,1-phenylene) ester, polymer with 2,2',2''-[1,3,5-triazine-2,4,6-triyltris(thio-2,1-ethanediylthio)]tris[ethanethiol] (9CI) (CA INDEX NAME)

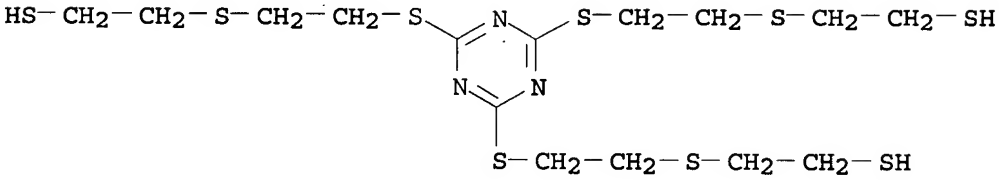
CM 1

CRN 129283-82-5
CMF C20 H18 O2 S3



CM 2

CRN 106664-07-7
CMF C15 H27 N3 S9



IC ICM C08G018-38
ICS C08G059-66; C08G075-04; C08G085-00; G02B001-04; G11B007-24; C07D251-38
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
IT 252669-75-3P 252669-76-4P **252669-77-5P**
252669-78-6P 252669-79-7P 252669-80-0P
252669-81-1P 252669-82-2P 252669-84-4P 252669-85-5P
252669-87-7P 252669-88-8P 252669-89-9P 252669-90-2P
252669-91-3P 252669-92-4P 252753-19-8P 252753-20-1P
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(curable resin compns. containing s-triazinetrithiol compds. and **optical** materials made from them)

L55 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:802859 HCAPLUS
DOCUMENT NUMBER: 132:50401
TITLE: Active energy ray-curable resin **compositions** with fast curability and transparent optical sheets made from them
INVENTOR(S): Motonaga, Akira; Konami, Yukichi
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11349645	A2	19991221	JP 1998-163365	199806

11
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PRIORITY APPLN. INFO.: JP 1998-163365
199806
11
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AB The compns. useful for brightness-enhancing prism of LCD, Fresnel lens of projection TV set, lenticular lens, etc., comprise (A) terminally di(meth)acrylated (optionally alkoxylated and halogenated) bisphenol-based diurethane compds., 10-60, (B) vinyl compds. having >1 double bonds and viscosity at 25° of <100 mPa·s, 20-60, (C) other type of vinyl compds. 10-60 parts, and (D) radical initiators at 0.01-5 phr (based on resin forming monomers), and give cured products with refractive index (n) >1.58. Thus, heating Takenate 500 388.4 with Viscoat 192 (phenoxyethyl acrylate) 783.1 and 2-(4-acryloxyethoxy-3,5-dibromophenyl)-2-(4-hydroxyethoxy-3,5-dibromophenyl)propane 2744 g in the presence of Bu2Sn dilaurate and an antioxidant at 70° for 8 h gave a diacrylated product mixture Mixing the mixture 22 with phenoxyethyl acrylate 20, TS 26 [2,2-bis(4-methacryloylethoxy-3,5-dibromophenyl)propane] 18, BR 31 (tribromophenoxyethyl acrylate) 40 and 2-hydroxy-2-methyl-1-phenylpronan-1-one 2.0 parts at 40° gave a UV-curable resin composition for making prism.

IT **252763-64-7P**
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(manufacture of radiation-curable resin compns. with fast curability and **transparent optical** sheets made from them)

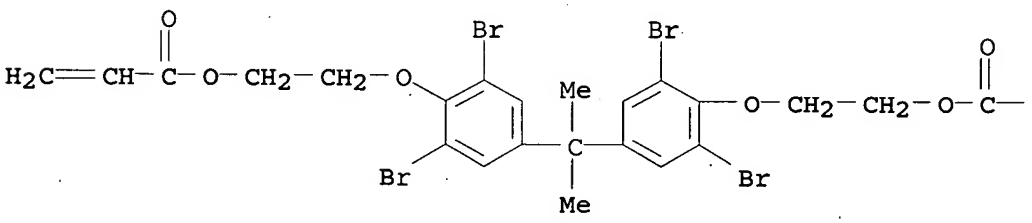
RN 252763-64-7 HCAPLUS

CN 2-Propenoic acid, 1,4-phenylenebis[methyleneiminocarbonyloxy-2,1-ethanediyloxy(3,5-dibromo-4,1-phenylene)(1-methylethylidene)(2,6-dibromo-4,1-phenylene)oxy-2,1-ethanediyl] ester, polymer with 2-phenoxyethyl 2-propenoate and S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

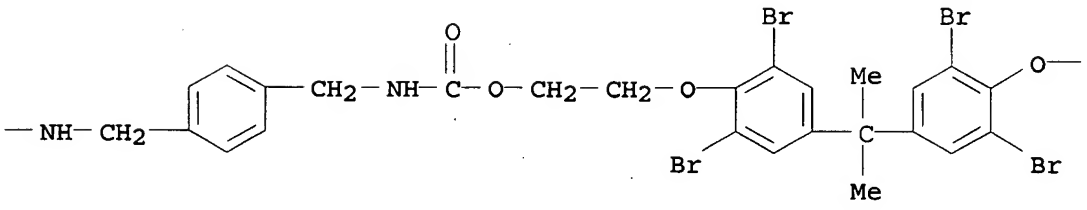
CM 1

CRN 252669-30-0
CMF C54 H52 Br8 N2 O12

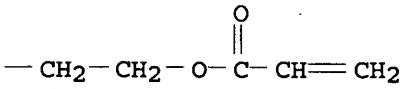
PAGE 1-A



PAGE 1-B

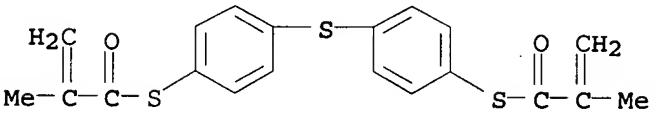


PAGE 1-C



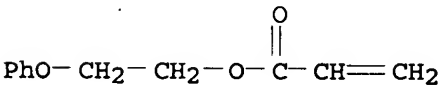
CM 2

CRN 129283-82-5
CMF C20 H18 O2 S3



CM 3

CRN 48145-04-6
CMF C11 H12 O3



IC ICM C08F290-06
ICS C08F002-50; C08F220-36; G02B001-04; G02B003-06; G02B003-08
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 76
IT 252669-33-3P 252669-34-4P 252669-35-5P 252669-36-6P
252763-62-5P **252763-64-7P**
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(manufacture of radiation-curable resin compns. with fast curability and **transparent optical** sheets made from them)

L55 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:394321 HCAPLUS

DOCUMENT NUMBER: 129:68407
TITLE: Manufacture of acrylic thio monomers for crosslinkable **compositions** in production of castings for ophthalmic lenses
INVENTOR(S): Toh, Huan Kiak; Chen, Fang; Kok, Chong Meng
PATENT ASSIGNEE(S): Sola International Holdings Ltd., Australia; Toh, Huan Kiak; Chen, Fang; Kok, Chong Meng
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9824761	A1	19980611	WO 1997-AU816	199712 03
			<--	
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9851108	A1	19980629	AU 1998-51108	199712 03
			<--	
US 6172140	B1	20010109	US 1999-308931	199907 27
			<--	
PRIORITY APPLN. INFO.:			AU 1996-3958 A	199612 03
			<--	
			WO 1997-AU816 W	199712 03
			<--	

AB A crosslinkable polymeric casting composition contained CH2:CR4COSMpCHR1CHR2M1pSCOCR4:CH2 [I; M, M1 = O(CO)m(CHR3)n or S(CO)m(CHR3)n; R1, R2 = H, (substituted) C1-10 alkyl, (substituted) C1-10 alkoxy, or CHR3SCOCR4:CH2; R3, R4 = H, (substituted) C1-10 alkyl, or (substituted) C1-10 alkoxy; m, p = 0 or 1; n = 0-3] and optionally another polymerizable monomer. This casting composition produces moldings with high n and rigidity, very low d., and good mech. properties and color for lenses. A typical I was manufactured by esterification of 4-mercaptomethyl-3,6-dithia-1,8-octanedithiol with methacrylic anhydride in Me tert-Bu ether-aqueous NaOH mixture in the presence of BHT.

IT **209068-35-9P**
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

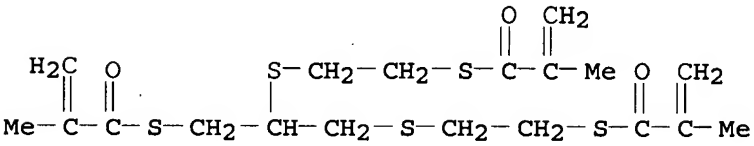
(manufacture of acrylic thio monomers for crosslinkable compns. in production of castings for ophthalmic **lenses**)

RN 209068-35-9 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-[[1-[[(2-methyl-1-oxo-2-propenyl)thio]methyl]-1,2-ethanediyl]bis(thio-2,1-ethanediyl)] ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 185814-24-8
CMF C19 H28 O3 S5



IC ICM C07C327-22
ICS C07C327-28; C08F020-38; C08F022-24; C08F028-02; C08F120-38; C08F122-24; C08F220-38; C08F222-24; C08F228-02; G02B001-04

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 63

IT **209068-35-9P 209068-36-0P 209068-37-1P**
209068-38-2P 209068-39-3P 209068-40-6P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(manufacture of acrylic thio monomers for crosslinkable compns. in production of castings for ophthalmic **lenses**)

IT **185814-24-8P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of acrylic thio monomers for crosslinkable compns. in production of castings for ophthalmic **lenses**)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:314752 HCAPLUS
DOCUMENT NUMBER: 129:28954
TITLE: **Compositions** for acrylic resins with excellent toughness and heat resistance
INVENTOR(S): Nakamura, Masataka; Oka, Koichiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10130339	A2	19980519	JP 1996-286542	199610 29

PRIORITY APPLN. INFO.: JP 1996-286542
199610
29

AB Title compns., useful for lenses, comprise (A) 100 parts compds. containing ≥2 (meth)acryloylthio groups and ≥1 aromatic rings, (B) 10-50 parts styrene (I) or its derivs. containing ≥1 radically polymerizable groups, and (C) 0.1-10 parts compds. containing ≥1 SH. Thus, a composition comprising 1,4-bis(2-mercaptoethylenethiomethylene)benzene dimethacrylate 100, I 11.2, 2-mercaptoethyl sulfide 2.7, and Perbutyl O (polymerization initiator) 0.11 part was heated in a glass mold and annealed to give a lens with refractive index 1.646 and good drilling property and heat resistance.

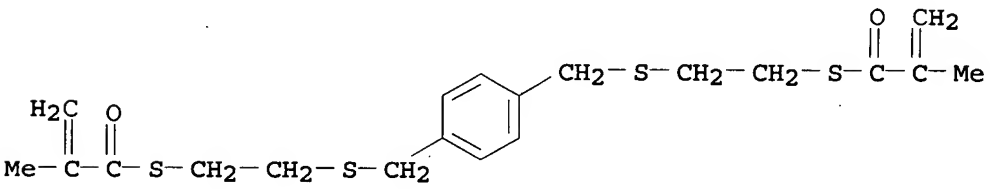
IT **207979-30-4P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
((meth)acryloylthio aromatic compound compns. for **lenses** with good heat resistance and toughness)

RN 207979-30-4 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-[1,4-phenylenebis(methylenethio-2,1-ethanediyl)] ester, polymer with ethenylbenzene and 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

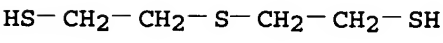
CM 1

CRN 131273-09-1
CMF C20 H26 O2 S4



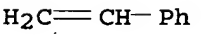
CM 2

CRN 3570-55-6
CMF C4 H10 S3



CM 3

CRN 100-42-5
CMF C8 H8



IC ICM C08F220-38
ICS C08F212-08; G02B001-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
IT **207979-30-4P 207979-31-5P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
((meth)acryloylthio aromatic compound compns. for **lenses** with good heat resistance and toughness)

L55 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:802130 HCAPLUS
DOCUMENT NUMBER: 128:102901
TITLE: Ultraviolet-curable **compositions** and their optical resins and lenses with high refractive index
INVENTOR(S): Suzuki, Junko; Kawauchi, Keiya; Kobayashi, Seiichi; Imai, Masao; Fujii, Kenichi
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09324023	A2	19971216	JP 1996-144661	19960606

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PRIORITY APPLN. INFO.: JP 1996-144661 19960606

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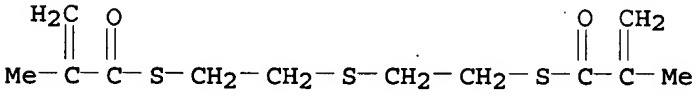
OTHER SOURCE(S): MARPAT 128:102901
AB Title compns. comprise (A) 50-95% ≥2-functional thio(meth)acrylates and (B) 5-50% thiourethane prepolymers prepared from ≥3-functional polythiols with polyisocyanates at the molar ratio of SH/NCO 3.0-7.0. Optical resins with nD ≥1.58 are manufactured by curing the above compns. by UV irradiation to show good heat and impact resistances, transparency, optical strain, and dyeability. Optical lenses with nD ≥1.58 are manufactured by pouring the above compns. into a mold and irradiating UV to them for curing. Thus, a composition containing bis(2-acryloylthioethyl) sulfide 72.5, a prepolymer [prepared from 79.2 parts HSCH2CH(SCH2CH2SH)CH2SCH2CH2SH and 20.8 parts xylylene diisocyanate] 27.5, and 2-hydroxy-2-methyl-1-phenylpropan-1-one 0.04 part, was poured into a mold and cured by UV irradiation to give a concave lens having nD = 1.65, Abbe number 35, good heat and impact resistances, transparency, and dyeability.
IT **117651-91-9P**, Bis(2-methacryloylthioethyl)sulfide
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(UV-curable compns. for **optical** resins and **lenses** with high refractive index, heat and impact resistances, transparency, and dyeability)

RN 117651-91-9 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)



IC ICM C08F299-02
ICS G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 73
IT **117651-91-9P**, Bis(2-methacryloylthioethyl)sulfide
119380-53-9P 121664-31-1P 141794-48-1P,
1,2-Bis(2-acryloylthioethylthio)-3-acryloylthiopropane
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(UV-curable compns. for **optical** resins and **lenses** with high refractive index, heat and impact resistances, transparency, and dyeability)

L55 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:784242 HCAPLUS
DOCUMENT NUMBER: 128:62619
TITLE: Resin **compositions** of (meth)acryloylthio-containing compounds and polymers of the **compositions**
INVENTOR(S): Nakamura, Masataka; Oka, Koichiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09316129	A2	19971209	JP 1996-131881	19960527

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PRIORITY APPLN. INFO.: JP 1996-131881 19960527

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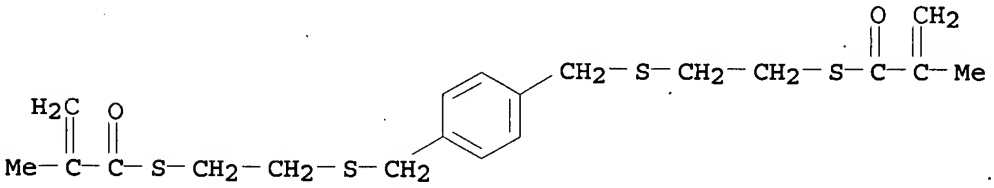
AB Compns. giving polymers with high rigidity and n, useful for lenses, prisms, etc., containing (a) ≥5% compds. which contain ≥1 SH and (b) compds. which contain ≥2 (meth)acryloylthio and ≥1 aromatic ring(s) and polymers prepared therefrom are claimed. Thus, a composition comprising 87.2% 1,4-bis(2-mercaptoethylenethiomethylene)benzene dimethacrylate, 5.7% 1,4-bis(2-mercaptoethylenethiomethylene)benzene, 7.1% α-methylstyrene, and 0.1% Perbutyl O (initiator) was heated in a glass mold at 120° for 17 h to give a lens with good drilling property, energy absorption 46 kg-mm, and ne 1.650.

IT **155500-39-3P**, 1,4-Bis(2-mercaptoethylenethiomethylene)benzen
e dimethacrylate-α-methylstyrene copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
or engineered material use); PREP (Preparation); USES (Uses)
((meth)acryloylthio compound compns. for plastic **lenses**
with good drilling property and heat resistance)
RN 155500-39-3 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-[1,4-
phenylenebis(methylenethio-2,1-ethanediyl)] ester, polymer with
(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

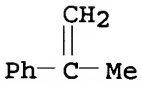
CM 1

CRN 131273-09-1
CMF C20 H26 O2 S4



CM 2

CRN 98-83-9
CMF C9 H10



IC ICM C08F020-38
ICS C08F002-44; B29D011-00; B29K033-00
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
IT **155500-39-3P**, 1,4-Bis(2-mercaptoethylenethiomethylene)benzen
e dimethacrylate-α-methylstyrene copolymer
200273-69-4P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
or engineered material use); PREP (Preparation); USES (Uses)
((meth)acryloylthio compound compns. for plastic **lenses**
with good drilling property and heat resistance)

L55 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:511044 HCAPLUS
DOCUMENT NUMBER: 121:111044
TITLE: Resin **compositions** for transmitting screens and their cured products
INVENTOR(S): Nakayama, Kenji; Aizawa, Hiroe; Ozaki, Tooru; Yokoshima, Minoru
PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06016754	A2	19940125	JP 1992-197429	19920702

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PRIORITY APPLN. INFO.: JP 1992-197429 19920702

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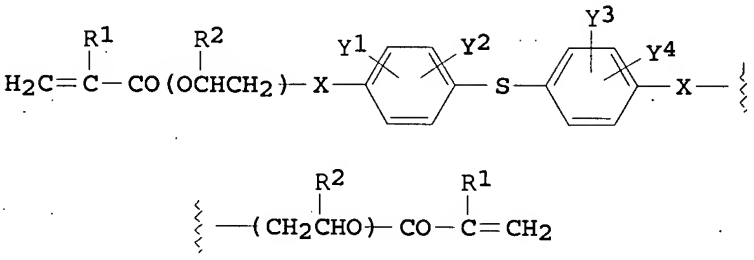
GI



I

AB Title compns. comprise urethane (meth)acrylates and/or epoxy (meth)acrylates, I (R1, R2 = H, Me; X = O, S; Y1-4 = H, Me; a, b = 0-5; a + b = 0-10), other ethylenic monomers, and photoinitiators and the compns. are cured to give products useful for Fresnel lenses. A composition of urethane acrylate (prepared from adipic acid-neopentyl glycol copolymer, ethylene glycol, TDI, and 2-hydroxyethyl acrylate) 30, di(4-acryloyloxyethylthio)phenyl sulfide 45, phenyloxyethyl acrylate 10, bisphenol A-ethylene oxide adduct diacrylate 5, Kayarad HX 220 10, Irgacure 184 3, and LA 82 (light stabilizer) 0.5 part was placed between an acrylic sheet and a Fresnel lens-shaped mold and UV-cured to give a lens (n 1.5850 at 25°) with easy mold release and good resiliency (no marking when pressed with a fingernail and left for 30 min).

IT **158021-26-2P**
RL: PREP (Preparation)
(preparation of, UV-cured, with high refractive index, for Fresnel **lenses**)

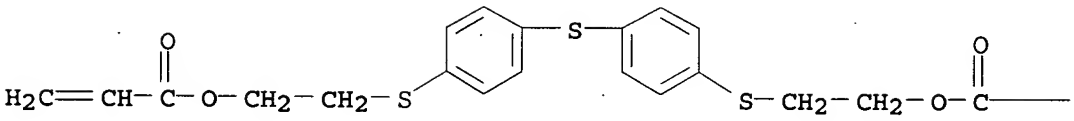
RN 158021-26-2 HCAPLUS

CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 3-[2,2-dimethyl-1-oxo-3-[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]propoxy]-2,2-dimethylpropyl ester, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] di-2-propenoate, 2-hydroxy-3-phenoxypropyl 2-propenoate, α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], 2-phenoxyethyl 2-propenoate, thiobis(4,1-phenylenethio-2,1-ethanediyl) di-2-propenoate, S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) and 2-(2,4,6-tribromophenoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

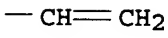
CM 1

CRN 133811-67-3
CMF C22 H22 O4 S3

PAGE 1-A

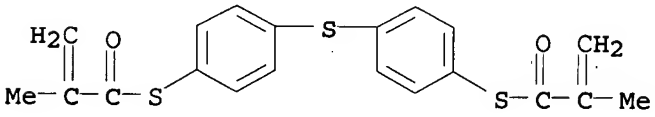


PAGE 1-B



CM 2

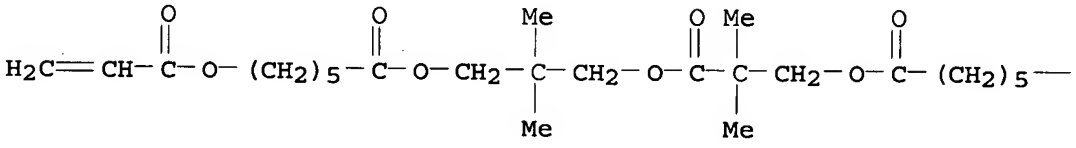
CRN 129283-82-5
CMF C20 H18 O2 S3



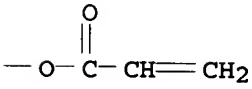
CM 3

CRN 91381-58-7
CMF C28 H44 O10

PAGE 1-A



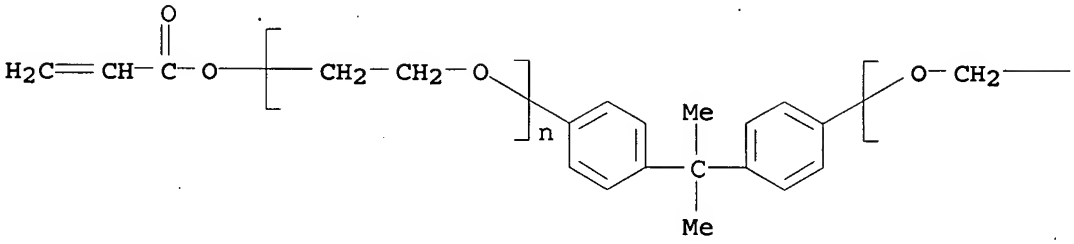
PAGE 1-B



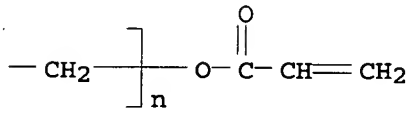
CM 4

CRN 64401-02-1
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4
CCI PMS

PAGE 1-A

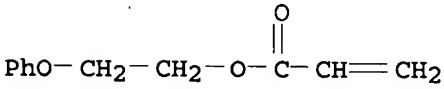


PAGE 1-B



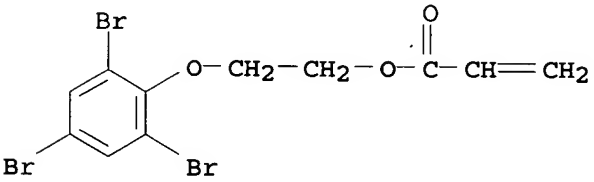
CM 5

CRN 48145-04-6
CMF C11 H12 O3



CM 6

CRN 7347-19-5
CMF C11 H9 Br3 O3



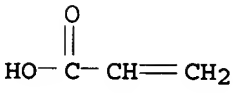
CM 7

CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 8

CRN 79-10-7
CMF C3 H4 O2

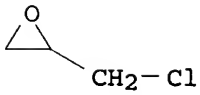


CM 9

CRN 25068-38-6
CMF (C15 H16 O2 . C3 H5 Cl O)x
CCI PMS

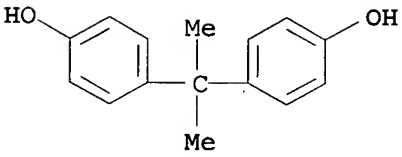
CM 10

CRN 106-89-8
CMF C3 H5 Cl O



CM 11

CRN 80-05-7
CMF C15 H16 O2



IC ICM C08F299-06
ICS C08F299-02; G02B001-04; G03B021-62
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 74
IT 156001-12-6P 156001-14-8P 156001-16-0P 156001-17-1P
158021-26-2P
RL: PREP (Preparation)
(preparation of, UV-cured, with high refractive index, for Fresnel **lenses**)

L55 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:459328 HCAPLUS
DOCUMENT NUMBER: 121:59328
TITLE: Polymerizable thiol methacrylate **compositions** and their use in plastic

lenses
INVENTOR(S): Baba, Setsuo; Oka, Koichiro
PATENT ASSIGNEE(S): Toray Industries, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06016722	A2	19940125	JP 1992-172791 <--	19920630
PRIORITY APPLN. INFO.:			JP 1992-172791 <--	19920630

OTHER SOURCE(S): MARPAT 121:59328

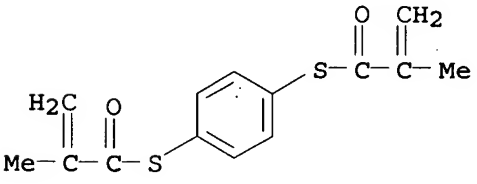
AB Title compns. with long pot life comprise thiol (meth)acrylates, polymerization initiators, and 0.4-2.0% 4,3,5-HO(Me3C)2C6H2CnH2n+1 (n = 1-3) and they are polymerized to give lenses. Thus, a mixture of 90% 1,4-bis(methacryloylthioethylthiomethyl)benzene and 10% α-methylstyrene containing 0.5% BHT and 0.1% tert-Bu peroxy(2-ethylhexanoate) showed pot life ≥2 days and was introduced in a mold composed of two glass plates and a 3 mm-thick gasket and heated stepwise at 50°, 70°, 90°, and 120° to give a transparent 3 mm-thick plate with yellowness index 1.7.

IT **131456-20-7P**
RL: PREP (Preparation)
(preparation of, for plastic **lenses**)

RN 131456-20-7 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-1,4-phenylene ester, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 131456-17-2
CMF C14 H14 O2 S2



CM 2

CRN 100-42-5
CMF C8 H8

H_2C═ CH— Ph

IC ICM C08F028-02
ICS C08F002-00; C08K005-13; C08L041-00; G02B001-04; G02C007-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35, 37
IT **131456-20-7P 155500-39-3P 156300-66-2P**
RL: PREP (Preparation)
(preparation of, for plastic **lenses**)

L55 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:656947 HCAPLUS
DOCUMENT NUMBER: 115:256947
TITLE: Vinyl compound polymerizable **compositions** for optical materials
INVENTOR(S): Matsuoka, Shingo; Nishitake, Toshihiro; Kida, Yasuji
PATENT ASSIGNEE(S): Tokuyama Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03140312	A2	19910614	JP 1989-278369	19891027

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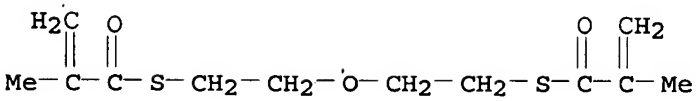
PRIORITY APPLN. INFO.: JP 1989-278369 19891027

<--

AB The title compns. giving optically uniform polymers comprise 100 parts thiocarboxylates containing ≥1 (per mol.) (meth)acryloylthio group and 0.01-40 parts radically copolymerizable monomers containing ≥1 (per mol.) alc. OH. Thus, thiomethacrylic acid 2-benzylthio ether 50, 2,2-bis(4-methacryloyloxyethoxyphenyl)propane 50, and 2-hydroxyethyl methacrylate 0.5 part were mixed to give a polymerizable composition, 100 parts of which was mixed with 1 part tert-butylperoxy 2-ethylhexanoate to give a solution, which was cast in a mold at 30-90° for 20 h to give an optically uniform polymer showing refractive index 1.597 and Abbe number 34.
IT **137316-25-7P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of, **transparent**, with uniform **optical** properties)
RN 137316-25-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with ethenylbenzene and S,S'-(oxydi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

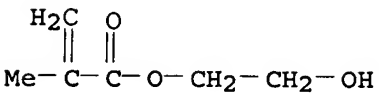
CM 1

CRN 117675-99-7
CMF C12 H18 O3 S2



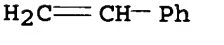
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

CRN 100-42-5
CMF C8 H8



IC ICM C08F220-38
ICS C08F220-38
ICA C08F220-20; C08F220-26; G02B001-04
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 73
IT 137316-11-1P 137316-12-2P 137316-13-3P 137316-14-4P
137316-15-5P 137316-16-6P 137316-17-7P 137316-18-8P
137316-19-9P 137316-21-3P 137316-22-4P 137316-23-5P
137316-24-6P **137316-25-7P 137316-26-8P**
137316-27-9P 137316-28-0P 137316-29-1P
137316-30-4P 137316-31-5P 137316-32-6P 137316-33-7P
137316-34-8P 137316-35-9P 137316-36-0P 137316-37-1P
137316-38-2P 137388-39-7P 137388-52-4P 137414-13-2P
137459-08-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of, **transparent**, with uniform **optical** properties)

L55 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:44189 HCAPLUS
DOCUMENT NUMBER: 114:44189
TITLE: Curable polymer **compositions** for optical materials
INVENTOR(S): Arakawa, Tsutomu; Minorikawa, Naoki; Maruyama, Satoshi; Takoshi, Hirotaka; Yoshida, Haruo
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02120305	A2	19900508	JP 1988-273222	19881031

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PRIORITY APPLN. INFO.: JP 1988-273222 19881031

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AB Title compns. giving heat-resistant, and optically uniform cured products with high refractive index and reduced water absorption, contain 10-90% 1,4-dimercaptophenyl dimethacrylate (I) and 90-10% copolymerizable vinyl monomers. Thus, 0.2 g 2,2'-azobis(12,4-dimethylvaleronitrile) was dissolved in a mixture of 35 g I and 15 g 2-hydroxyethyl acrylate (II), heated at 35° for 10 h under N in a mold, demolded at 80°, and further heated at 100° for 1 h to obtain an uniform, colorless, and transparent I-II copolymer. The polymer had n 1.600 (20°), light transmittance 90% (550 nm), glass temperature 130°, and water absorption 0.65% after vacuum drying at 50° for 5 days followed by immersing in 100° H2O for 2 h, compared with 1.486, 92, 55, and 1.47, resp. for II homopolymers.

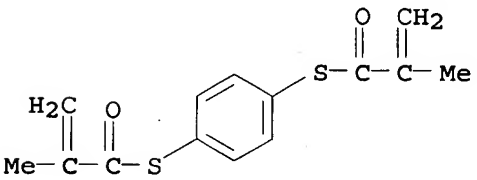
IT **131456-18-3P**
RL: PREP (Preparation)
(preparation of, heat-resistant and **optically** uniform with reduced water absorption, with high refractive index)

RN 131456-18-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with S,S'-1,4-phenylene bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

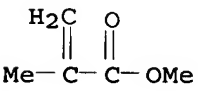
CM 1

CRN 131456-17-2
CMF C14 H14 O2 S2



CM 2

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F220-38
ICS C08F220-38
ICA C09D004-02; C09J004-02; G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT **131456-18-3P 131456-19-4P 131456-20-7P**
131456-21-8P 131456-22-9P 131456-23-0P
131456-24-1P 131456-25-2P 131456-26-3P
131459-44-4P
RL: PREP (Preparation)
(preparation of, heat-resistant and **optically** uniform with reduced water absorption, with high refractive index)

L55 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:533036 HCAPLUS
DOCUMENT NUMBER: 113:133036
TITLE: Bis[4-(methacryloylthio)phenyl] sulfide for curable **compositions**
INVENTOR(S): Maruyama, Satoshi; Minorikawa, Naoki; Arakawa, Tsutomu; Yoshida, Haruo
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9004587	A1	19900503	WO 1989-JP1076	198910 20
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W: AU, US				
RW: DE, FR, GB				
JP 02113005	A2	19900425	JP 1988-265776	198810 20
			<--	
JP 06081770	B4	19941019		
JP 02113027	A2	19900425	JP 1988-265778	198810 20
			<--	
JP 07091384	B4	19951004		
JP 02160762	A2	19900620	JP 1988-315559	198812 14
			<--	
JP 05059103	B4	19930830		
JP 03021638	A2	19910130	JP 1989-157528	198906 20
			<--	
JP 07051630	B4	19950605		
JP 03054226	A2	19910308	JP 1989-190203	198907

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			<--	
JP 07051631	B4	19950605		
AU 8944089	A1	19900514	AU 1989-44089	
				198910
				20
			<--	
AU 616064	B2	19911017		
EP 394495	A1	19901031	EP 1989-911620	
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				20
			<--	
EP 394495	B1	19940831		
R: DE, FR, GB				
US 5183917	A	19930202	US 1990-499421	
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US 5270439	A	19931214	US 1992-952655	
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PRIORITY APPLN. INFO.:			JP 1988-265776	A
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			JP 1988-265778	A
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			JP 1989-157528	A
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			JP 1989-190203	A
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			WO 1989-JP1076	A
				198910
				20
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			US 1990-499421	A3
				199006
				20
			<--	

AB The title sulfide (I) is polymerized with vinyl compds. and/or polythiols, or used as prepolymers with comonomers, to give products with high n and good strength and water resistance, particularly suitable for optical use. Adding 10 g 4,4'-thiodibenzenethiol to 28.8 g NaOH, 200 mL H2O, 0.4 g C8H17NMe3+ Br-, and 25.1 g methacryloyl chloride in 200 mL CHCl2, and stirring for 1 h gave I, 35 g of which was heated with 15 g Me methacrylate and an azo compound catalyst for 10 h at 35° and at 10°/h to 80°
and postcuring at 100° for 1 h gave a polymer with n 1.620, transparency 89%, glass temperature 142°, and water absorption

0.53%; vs. 1.498, 92, 90, and 1.05, resp. for diethylene glycol bis(allyl carbonate) polymer.

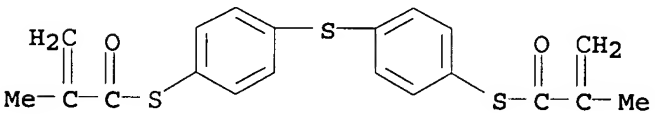
IT **129283-83-6P**
RL: PREP (Preparation)
(preparation of **transparent** and refractive, for **optical** uses)

RN 129283-83-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

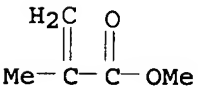
CM 1

CRN 129283-82-5
CMF C20 H18 O2 S3



CM 2

CRN 80-62-6
CMF C5 H8 O2



IC ICM C07C327-22
ICS C08F220-38; C08F299-02; C08G075-04; C08L081-02; C09D004-00; C09J004-00; G02B001-04

CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 25

IT **129283-83-6P 129283-84-7P 129283-85-8P**
129283-86-9P 129283-87-0P 129283-88-1P
129283-89-2P 129283-90-5P 129283-91-6P
129283-92-7P 129283-93-8P 129283-94-9P
129283-95-0P 129283-96-1P 129283-97-2P
129283-98-3P 129283-99-4P 129284-00-0P
129284-01-1P 129284-02-2P 129304-80-9P
129304-81-0P 129304-82-1P 129304-83-2P
129304-84-3P 129304-85-4P 129304-86-5P
129304-87-6P 129304-93-4P 129304-94-5P
RL: PREP (Preparation)
(preparation of **transparent** and refractive, for **optical** uses)

=>

I/II and X/XI/XII are not indexed together

=> d l46 ibib abs hitstr hitind

L46 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:1124283 HCAPLUS
DOCUMENT NUMBER: 145:455647
TITLE: Poly(urethane urea) polysulfides for optical applications
INVENTOR(S): Bojkova, Nina V.; Smith, Robert A.; Herold, Robert D.; Rao, Chandra B.; Mcdonald, William H.; Nagpal, Vidhu J.; Graham, Marvin J.; Yu, Phillip C.; Sawant, Suresh G.; Okoroafor, Michael O.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 43pp., Cont.-in-part of U.S. Ser. No. 303,892.
CODEN: USXXCO
DOCUMENT TYPE: Patent
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PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2006241273	A1	20061026	US 2006-360011		20060222
US 2003149217	A1	20030807	US 2002-287716		20021105
US 2004138401	A1	20040715	US 2003-725023		20031202
US 2004143090	A1	20040722	US 2003-725034		20031202
US 7009032	B2	20060307			
US 2005282991	A1	20051222	US 2005-141636		20050531
US 2006025563	A1	20060202	US 2005-233790		20050923
PRIORITY APPLN. INFO.:			US 2001-332829P	P	20011116
			US 2002-287716	B2	20021105
			US 2002-435537P	P	20021220
			US 2003-725023	B2	20031202

US 2005-141636	A2	200505 31
US 2005-303670	A2	200512 16
US 2005-303671	A2	200512 16
US 2005-303707	A2	200512 16
US 2005-303832	A2	200512 16
US 2005-303892	A2	200512 16
US 2003-725034	A3	200312 02

AB The present invention relates to a sulfur-containing polyureaurethane and a method of preparing the polyureaurethane. In an embodiment, the sulfur-containing polyureaurethane adapted to have a refractive index of at least 1.57,an Abbe number of at least 32 and a d. of less than 1.3 g/cm3, when at least partially cured.

IT **913337-95-8P 913337-98-1P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(oligomeric; poly(urethane urea) polysulfides for **optical** applications)

RN 913337-95-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with 4-ethenylcyclohexene and 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

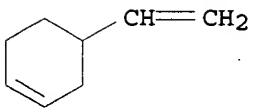
CM 1

CRN 3570-55-6
CMF C4 H10 S3

$$HS-CH_2-CH_2-S-CH_2-CH_2-SH$$

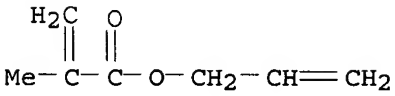
CM 2

CRN 100-40-3
CMF C8 H12



CM 3

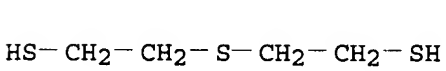
CRN 96-05-9
CMF C7 H10 O2



RN 913337-98-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with 5-ethenylbicyclo[2.2.1]hept-2-ene and 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

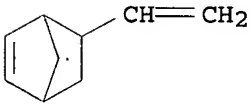
CM 1

CRN 3570-55-6
CMF C4 H10 S3



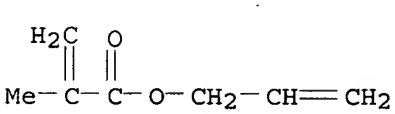
CM 2

CRN 3048-64-4
CMF C9 H12



CM 3

CRN 96-05-9
CMF C7 H10 O2



IT **913337-93-6P 913337-94-7P**
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant);

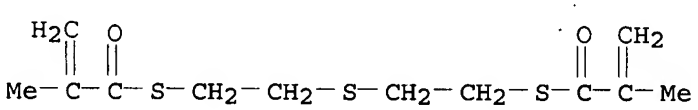
PREP (Preparation); RACT (Reactant or reagent)
(oligomeric; poly(urethane urea) polysulfides for optical applications)

RN 913337-93-6 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-2,1-ethanediyl) ester, polymer with 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9
CMF C12 H18 O2 S3



CM 2

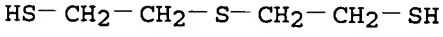
CRN 3570-55-6
CMF C4 H10 S3

RN 913337-94-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

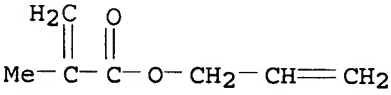
CM 1

CRN 3570-55-6
CMF C4 H10 S3



CM 2

CRN 96-05-9
CMF C7 H10 O2



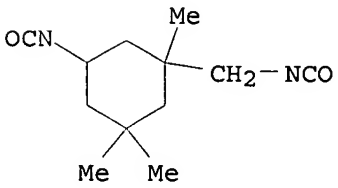
IT **913338-08-6P 913338-09-7P 913338-19-9P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(poly(urethane urea) polysulfides for optical applications)

RN 913338-08-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with 1,3-bis(1-isocyanato-1-methylethyl)benzene, 4-ethenylcyclohexene, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

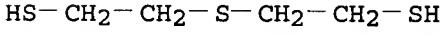
CM 1

CRN 4098-71-9
CMF C12 H18 N2 O2



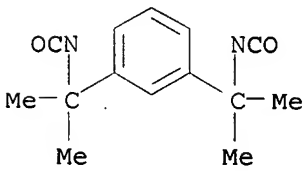
CM 2

CRN 3570-55-6
CMF C4 H10 S3



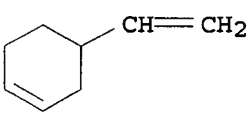
CM 3

CRN 2778-42-9
CMF C14 H16 N2 O2



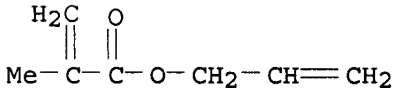
CM 4

CRN 100-40-3
CMF C8 H12



CM 5

CRN 96-05-9
CMF C7 H10 O2



RN 913338-09-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with Desmodur W, 5-ethenylbicyclo[2.2.1]hept-2-ene and 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

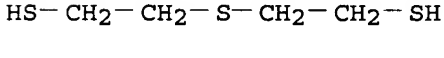
CM 1

CRN 79103-62-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

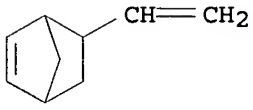
CM 2

CRN 3570-55-6
CMF C4 H10 S3



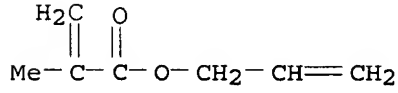
CM 3

CRN 3048-64-4
CMF C9 H12



CM 4

CRN 96-05-9
CMF C7 H10 O2

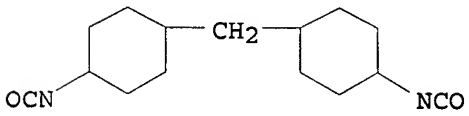


RN 913338-19-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with 5-ethenylbicyclo[2.2.1]hept-2-ene, 1,1'-methylenebis[4-isocyanatocyclohexane] and 2,2'-thiobis[ethanethiol] (9CI) (CA INDEX NAME)

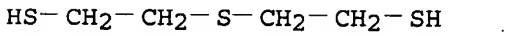
CM 1

CRN 5124-30-1
CMF C15 H22 N2 O2



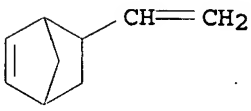
CM 2

CRN 3570-55-6
CMF C4 H10 S3



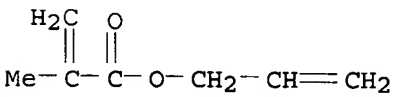
CM 3

CRN 3048-64-4
CMF C9 H12



CM 4

CRN 96-05-9
CMF C7 H10 O2



INCL 528044000
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 721451-94-1P 721451-95-2P 721452-00-2P 721452-01-3P
913337-95-8P 913337-96-9P 913337-97-0P
913337-98-1P 913337-99-2P 913338-00-8P 913338-01-9P
913338-02-0P 913338-03-1P 913338-04-2P 913338-05-3P

913338-06-4P 913338-07-5P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(oligomeric; poly(urethane urea) polysulfides for optical applications)

IT 721451-91-8P 913337-92-5P **913337-93-6P**
913337-94-7P
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(oligomeric; poly(urethane urea) polysulfides for optical applications)

IT 721451-88-3P 721451-89-4P **913338-08-6P**
913338-09-7P 913338-10-0P 913338-11-1P 913338-12-2P
913338-13-3P **913338-19-9P** 913338-20-2P 913338-21-3P
913338-22-4P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(poly(urethane urea) polysulfides for optical applications)